

## 2.0 CHAPTER 2 ALTERNATIVES

### 2.1 INTRODUCTION

To address the project Purpose and Need (described in **Chapter 1 – Purpose and Need**), a wide range of alternative solutions that could improve safety and local and regional mobility on and around Interstate 25 (I-25) through the City of Pueblo (City) were rigorously explored and objectively evaluated. This chapter describes the alternative development process and summarizes the methods for evaluation and screening.

To provide the reader with an understanding of the I-25 corridor setting, the Corridor Context section (Section 2.2), describes the history of Pueblo, from the early 1600s through to the present day. This context allows the reader to consistently evaluate the future opportunities in the context of Pueblo's early beginnings. This section is followed by a brief description of the highway's Current Conditions (Section 2.3) and a discussion of Context Sensitive Solutions (Section 2.4) and how using this approach facilitated the decision-making process, resulting in transportation solutions that meet the project Purpose and Need, are sensitive to the environment, and reflect community values.

A discussion of the Alternatives Development Process and evaluation and screening of alternatives (Section 2.5) and the Final Detailed Alternatives (Section 2.6) takes the reader through each step in the alternatives screening process. The chapter concludes with identification of a Preferred Alternative (Section 2.7) and how this alternative ties back to the project Purpose and Need. The scale of the Preferred Alternative and funding limitations dictate that the project be constructed in phases. Two phases, designated as Phase 1 and Phase 2, are proposed; phasing of the project and available funding sources are discussed in greater detail in **Chapter 5 – Phased Project Implementation**. Phase 1, currently the only funded phase of the Preferred Alternative, would be constructed first and consists of improvements planned from approximately the Ilex interchange north to 29th Street and connecting the I-25 mainline improvements to those previously completed just north of 29th Street defined as the North Area as described in **Chapter 3 - Introduction**. Implementation of future phases may not

occur if funding beyond the initial phase cannot be identified.

### 2.2 CORRIDOR CONTEXT

The City sits at the confluence of Fountain Creek and the Arkansas River. Historical development patterns of the region can be traced back to the 1600s and 1700s when all of Colorado was part of the Spanish Empire administered and controlled from New Spain (Mexico). Transportation to and through the Pueblo area by explorers, trappers, and traders was by way of the Arkansas River. In 1872, William J. Palmer, a retired Civil War general and railroad visionary, founded the Denver and Rio Grande Railway (D&RG) through what is now the City of Pueblo. The rail line became pivotal in the development of Pueblo first as a trade and shipping center and later as a steel manufacturing center. By 1887, Pueblo sat at the crossroads of six major railroads traveling north-south and east-west.

Early urban growth and development in Pueblo occurred along with the steel boom between 1860 and the 1920s. During that time, horse-drawn streetcars, which later were converted to electrified streetcars, served the transportation needs of the City until 1947, when they were replaced by rubber-tired vehicles. Following World War II, Colorado leaders saw the economic opportunities that a new highway would present for business and residential growth along the Front Range. Construction of the Pueblo Highway (later named I-25) through Pueblo began in 1949. Consistent with highway construction of the time, I-25 was built in a narrow right-of-way (ROW) compared to today's standards. Highway engineers purchased only what was needed for the highway. Although citizens and community leaders of Pueblo generally favored construction of the highway, neighborhoods and commercial areas adjacent to the road were heavily impacted. Several neighborhoods were severed, with I-25 becoming an east-west barrier between neighbors and affecting access to local grocers, churches, schools, and other neighborhood-level commercial areas and local streets. Homes in the path of the highway were either purchased and demolished or suffered a reduction in the size of their yards. Ten years later, I-25 was dedicated, marking a new era for Pueblo and its role as a transportation hub in southern Colorado.

### 2.3 CURRENT CONDITIONS OF I-25

Today, I-25 is a north-south highway extending from the border of Mexico and into Wyoming through the central areas of New Mexico, Colorado, and Wyoming. The route serves as a strategic international corridor under the North American Free Trade Agreement and as an economic lifeline for the City.

In Colorado, Pueblo is the largest city south of Colorado Springs and is the only available source of many services required by residents in the southern part of the state. United States Highway (US) 50 is a major route serving east-west travel through Pueblo, which further bolsters the City's role as a transportation hub. No other state highways or major roads provide a north-south alternative to I-25.

Through Pueblo, I-25 is among the oldest segments of the interstate in Colorado, and it actually predates the Interstate Highway System. Since opening in 1959, only a few improvements have been made to this segment of I-25. Today, there is recent evidence indicating that this stretch of highway has reached, and in some cases exceeded, its service life.

Because the economic vitality of Pueblo is connected to I-25, it is essential that the Colorado Department of Transportation (CDOT) address the deteriorating condition of this segment of the highway. The City recently invested significant resources to restore the historic downtown area by adding attractions such as a performing arts center, new library campus, children's museum, convention center, and river park and walkway, known as the Historic Arkansas Riverwalk of Pueblo (HARP), near the historic location of the Arkansas River. The downtown area has undergone significant restoration of buildings, which has stimulated reuse of office buildings and stores. The continued success of these investments is directly dependent on good, safe access for local and regional travelers on I-25.

Many residents of Pueblo remember the impacts that construction of the highway had on their community. Today, residents and the business owners are aware of both the benefits and impacts from I-25 that they experience on a daily basis. Therefore, when CDOT, the Federal Highway Administration (FHWA), and the Pueblo Area Council of Governments (PACOG) began to study the transportation problems on I-25 in 2000, citizens, business people, City

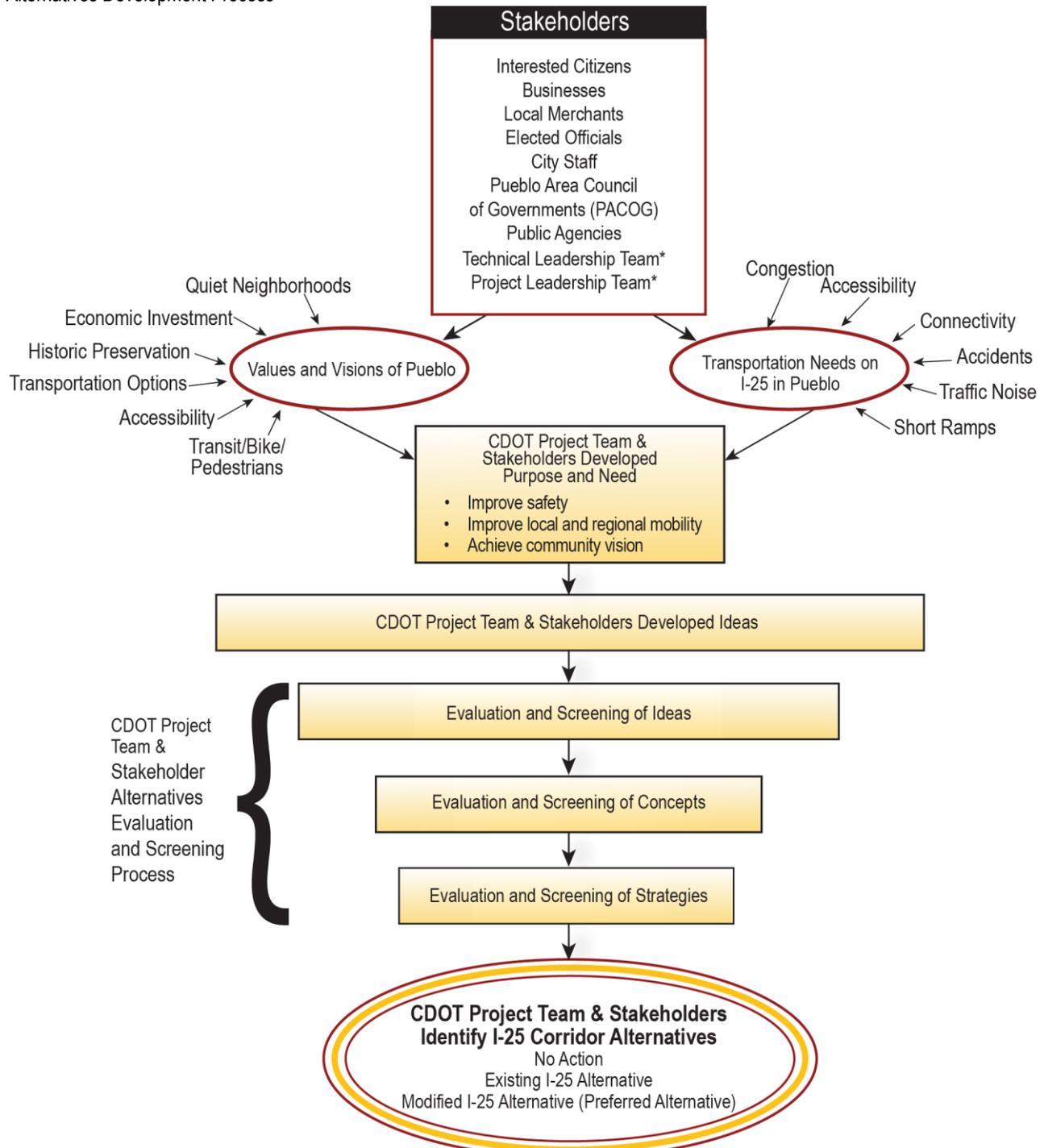
elected officials, and City staff answered CDOT's call to be actively involved in the planning and design of improvements for what is now referred to as the New Pueblo Freeway.

### 2.4 CONTEXT-SENSITIVE SOLUTIONS AND THE ALTERNATIVES DEVELOPMENT PROCESS

CDOT recognized that improvements to I-25 through Pueblo required a multi-disciplinary approach to developing alternatives that would involve a working team of transportation and highway design professionals, environmental managers, public involvement specialists, and a wide range of community stakeholders with an interest in the project's outcome. To implement this approach, the CDOT Project Team followed the guidelines of the National Cooperative Highway Research Program (NCHRP) Report 480, *A Guide to Best Practices for Achieving Context Sensitive Solutions* (NCHRP, 2002), for studying improvements to I-25 through Pueblo. Using the Context Sensitive Solutions process outlined in the report, the CDOT Project Team developed and followed an effective decision-making process that resulted in development of solutions that meet the Purpose and Need for the project, are sensitive to environmental and community resources, and reflect community values. The Context Sensitive Solutions process is documented in the *I-25 New Pueblo Freeway Alternatives Analysis and Project Development Report (Appendix A)*. A Technical Leadership Team made up of engineers, planners, and safety personnel from CDOT, the City of Pueblo, Pueblo County, PACOG, Colorado State Patrol, City Police, and the consultant team provided technical input during the evaluation and screening process. (Project leadership teams and committees are described in **Chapter 6 – Comments and Coordination**.)

The Alternatives Development Process shown in **Exhibit 2-1** began with identifying transportation problems and understanding the values and vision of the citizens of Pueblo. The CDOT Project Team met with as many stakeholders as possible at the beginning of the project and continued public involvement through the Alternatives Development and Evaluation stage. The stakeholders included interested citizens, businesses, local merchant groups, elected officials, City and County staff, PACOG staff, and the Technical Leadership Team and Project

**EXHIBIT 2-1**  
**Alternatives Development Process**



\*Participants on the Technical Leadership Team and Project Leadership Team are listed in Section 6.2.1 and 6.2.2 of the Comments and Coordination Chapter.

Leadership Team. These meetings resulted in a list of I-25 corridor transportation problems, as well as community issues and values. The CDOT Project Team and stakeholders used this list to write a draft Purpose and Need statement, which was later refined through agency and public scoping meetings. From these early meetings, a Community Vision (included in **Chapter 1 – Purpose and Need, Exhibit 1-7**) was crafted that constitutes an important element in the Alternatives Development Process.

The next step in the Alternatives Development Process was to brainstorm ideas for potential solutions to improve I-25 through Pueblo. Through an extensive public outreach process detailed in **Chapter 6 – Comments and Coordination**, a series of public and agency meetings were held to engage the CDOT Project Team and stakeholders in identifying and documenting a full range of possible solutions. The meetings also focused on developing criteria to evaluate the solutions. The foundations of the evaluation criteria were the Purpose and Need and the Community Vision.

To ensure a comprehensive and rigorous evaluation of solutions, the CDOT Project Team used three levels of evaluation and screening: Evaluation and Screening of Ideas, Evaluation and Screening of Concepts, and Evaluation and Screening of Strategies. At each step, solutions were assessed against the evaluation criteria developed for that step to evaluate the strengths and weaknesses of each solution. A No Action Alternative is always considered as part of the alternative screening process.

Solutions not meeting the project Purpose and Need were either eliminated or enhanced and modified and taken to the next step of evaluation and screening. **Exhibit 2-2** shows the three-level screening process that resulted in the No Action Alternative, the Existing I-25 Alternative, and the Modified I-25 Alternative (Preferred Alternative) for the New Pueblo Freeway project.

## 2.5 ALTERNATIVES DEVELOPMENT, EVALUATION, AND SCREENING

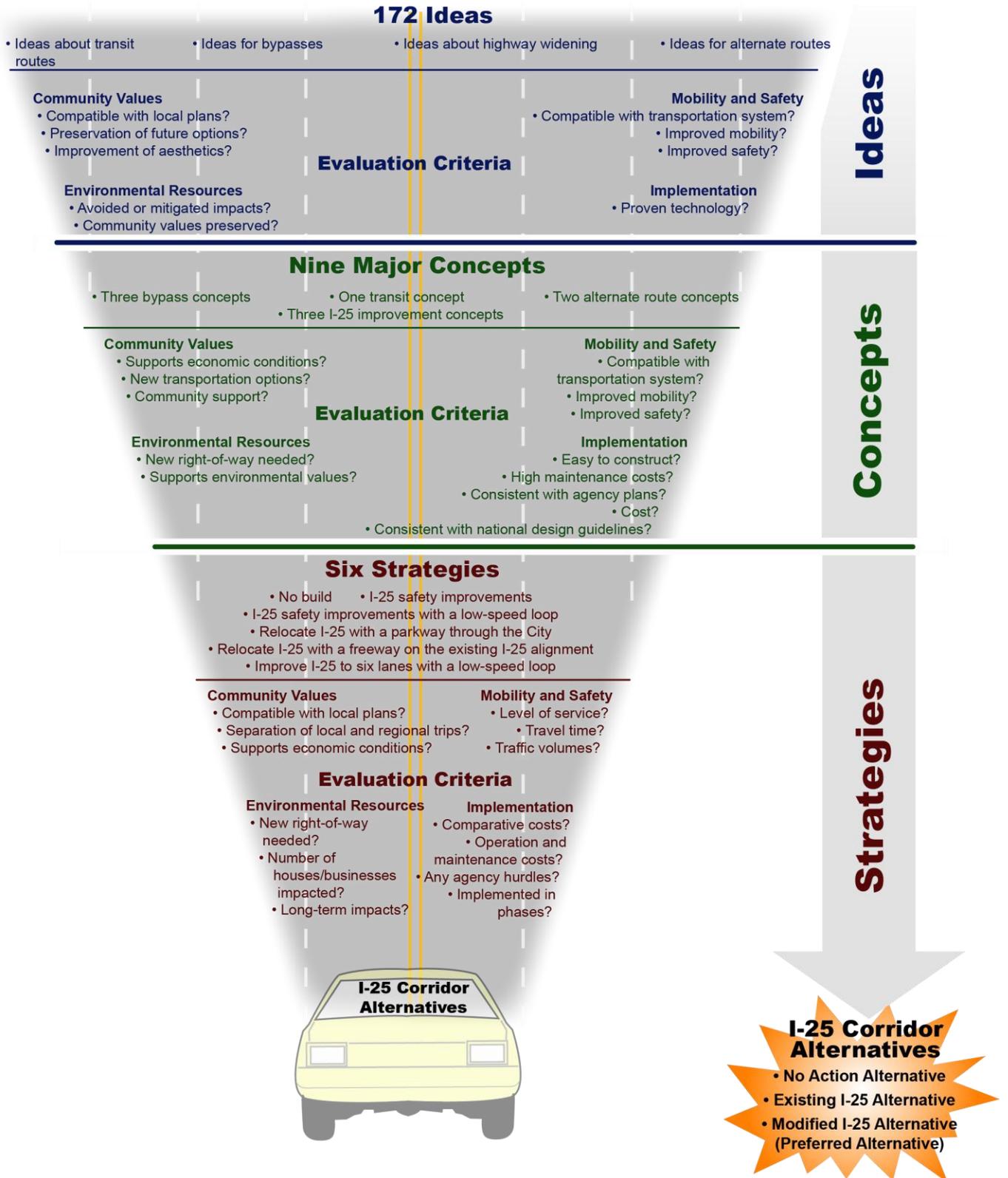
This section describes the development and evaluation of ideas, concepts, strategies, and alternatives for the project and discusses the criteria used for measuring effectiveness in meeting the identified needs. Using the Purpose and Need and the Community Vision statement included in **Chapter 1 – Purpose and Need**, criteria for evaluating

alternatives were developed by the CDOT Project Team and the stakeholders. Criteria were classified into four categories: 1) Community Values, 2) Environmental Resources, 3) Mobility and Safety, and 4) Implementation.

### SUMMARY OF PURPOSE & NEED AND COMMUNITY VISION

Purpose
<p>The <b>purpose</b> of the New Pueblo Freeway project is to:</p> <ul style="list-style-type: none"> <li>➤ Improve safety by addressing deteriorating roadways and bridges and non-standard road characteristics on I-25.</li> <li>➤ Improve local and regional mobility within and through the City of Pueblo to meet existing and future travel demands.</li> </ul>
Need
<p>The <b>need</b> of the New Pueblo Freeway project is to address:</p> <ul style="list-style-type: none"> <li>➤ <b>Safety problems.</b> This corridor has high accident rates that exceed state averages, areas where shoulders are too narrow to safely accommodate a broken-down vehicle, on and off ramps with inadequate lengths to maneuver vehicles, and inadequate spacing of interchanges to safely merge into highway traffic.</li> <li>➤ <b>Mobility problems.</b> In this segment there are interchanges that do not connect to appropriate City streets, a lack of alternative routes for north-south and east-west connectivity, areas of reduced speed, insufficient capacity for projected traffic forecasts and poor levels of service, aging bridges with inadequate bridge sufficiency ratings, and conflicts with local and regional travel.</li> </ul>
Community Vision
<p>The community feels that I-25 improvements must:</p> <ul style="list-style-type: none"> <li>➤ Balance regional trips with local trips</li> <li>➤ Be a safe facility</li> <li>➤ Preserve environmental, community, business, and the neighborhood values</li> <li>➤ Reflect the culture, history, and character of Pueblo</li> <li>➤ Consider the connection between improvements and the surrounding land use</li> <li>➤ Be maintainable</li> <li>➤ Be user friendly</li> <li>➤ Be understandable</li> <li>➤ Communicate information clearly</li> <li>➤ Be comfortable to drive</li> <li>➤ Provide personal safety features</li> <li>➤ Meet drivers' expectations</li> <li>➤ Be multi-modal</li> <li>➤ Provide fair treatment for those impacted</li> <li>➤ Accommodate future travel needs and technology improvements</li> </ul> <p>This vision requires the continuing partnership between public agencies, the citizens, and private developers to support, implement, and fund improvements.</p>

**EXHIBIT 2-2**  
**Alternatives Evaluation Criteria and Screening Process**



Evaluation and Screening of Ideas involved evaluating how well stakeholder ideas met the criteria developed for that stage of the process. Ideas not meeting the criteria were either modified and included as features in the final Build Alternatives or set aside because they did not meet the Purpose and Need. Ideas that met the Purpose and Need were developed into concepts under the following categories: Bypasses, Alternative Routes, Transit, and I-25 Improvement Concepts.

Similar to evaluation and screening of ideas, the concepts were evaluated using evaluation criteria developed from the Purpose and Need and the Community Vision. Concepts were ranked on how well they met the criteria, screened based on the Purpose and Need, then modified into six strategies and sent on to strategy screening.

During evaluation and screening of Strategies, the six strategies were again evaluated based on the evaluation criteria developed from the Purpose and Need and the Community Vision. One of the strategies was identified for additional evaluation and later modified into the Existing I-25 Alternative, which proceeded through detailed evaluation in the Draft Environmental Impact Statement (DEIS). A more detailed discussion of the alternatives evaluation and screening process follows, and an illustration of the process is presented in **Exhibit 2-2**.

### 2.5.1 Screening of Ideas

The evaluation criteria shown in **Exhibit 2-3** were developed with the help of stakeholders through feedback from Technical Leadership Team meetings, citizen meetings, a Colorado State Fair information booth, and a project hot line. As stated above, the criteria were used to evaluate the strengths and weaknesses of each idea and fell into four subject areas: 1) Community Values, 2) Environmental Resources, 3) Mobility and Safety, and 4) Implementation. The CDOT Project Team and stakeholders evaluated more than 500 individual ideas gathered in outreach meetings, which were subsequently refined to 172 ideas when duplications and similar suggestions were combined. The ideas represented a large variety of solutions to the City's transportation problems, ranging from major improvement concepts such as constructing a beltway around the City to specific, localized improvements such as adding a traffic signal at a particular intersection. A full listing of ideas is included in the *I-25 New Pueblo Freeway Alternatives Analysis and Project Development Report (Appendix A)*.

This screening of these 172 ideas resulted in 19 ideas that were combined into nine major concepts, which were then advanced to the next level of evaluation and screening. **Exhibit 2-4** shows the nine major concepts and illustrates examples of stakeholder ideas that provided the basis for each concept.

**EXHIBIT 2-3**  
Criteria Used for Evaluation of Ideas

Community Values	Environmental Resources	Mobility and Safety	Implementation
<ul style="list-style-type: none"> <li>➤ Can this idea be compatible with local plans, goals, and objectives?</li> <li>➤ Does this idea preserve future transportation mobility options?</li> <li>➤ Does this idea improve the aesthetics of the community?</li> </ul>	<ul style="list-style-type: none"> <li>➤ Can environmental impacts be avoided or mitigated with this idea?</li> <li>➤ Can the environmental community and the neighborhood values be preserved with this idea?</li> </ul>	<ul style="list-style-type: none"> <li>➤ Can this idea be compatible with the existing or planned transportation system within Pueblo?</li> <li>➤ With this idea, will mobility within the study area be improved to meet existing and future travel demands?</li> <li>➤ Does this idea improve safety on I-25 within Pueblo?</li> </ul>	<ul style="list-style-type: none"> <li>➤ Is this idea a proven transportation technology?</li> </ul>

EXHIBIT 2-4  
Nine Major Concepts Developed from Ideas from the Public

		Concepts*	Ideas from the Public
Bypass Concepts	<b>Double Decking I-25</b> The second deck would be four lanes (two lanes in each direction) for high speed and limited access. Existing I-25 would continue to function as it does today.	<ul style="list-style-type: none"> <li>✓ Build a parallel route to I-25</li> <li>✓ Double deck the interstate</li> </ul>	
	<b>I-25 Bypass</b> Build a high-speed bypass east or west of Pueblo. This new road would be four lanes (two lanes in each direction) with limited access. Existing I-25 would continue to function as it does today.	<ul style="list-style-type: none"> <li>✓ Build a beltway on the east side of Pueblo</li> <li>✓ Build a perimeter road around Pueblo</li> <li>✓ Extend Stem Beach to the east and connect it up again on the north end of town</li> <li>✓ Build an I-25 bypass on the west side of Pueblo</li> <li>✓ Build a bypass around Pueblo with limited access</li> </ul>	
	<b>Tunnel under existing I-25</b> The in-tunnel road would be four lanes (two lanes in each direction) with limited access. Existing I-25 would become a lower-speed facility and would no longer be classified as an interstate.	<ul style="list-style-type: none"> <li>✓ Increase capacity of I-25 by tunneling under the existing I-25</li> </ul>	
Alternate Route Concepts	<b>Lower-Speed Alternate Route</b> Build a lower-speed beltway route around the City that would serve local trips which would normally travel on I-25. This would be a new four-lane (two lanes in each direction) road.	<ul style="list-style-type: none"> <li>✓ Build alternate routes (a beltway) around Pueblo</li> <li>✓ Build a beltway route road around the town</li> <li>✓ Make an alternate route for trucks</li> </ul>	
	<b>High Speed Alternate Route</b> Build a high-speed, limited-access alternate beltway route around the City. This would be a new four-lane (two lanes in each direction) highway.	<ul style="list-style-type: none"> <li>✓ Build a beltway route around the town</li> <li>✓ Make an alternate route for trucks</li> </ul>	
I-25 Improvement Concepts	<b>Eight Lanes on I-25</b> Add four lanes (two in each direction) to I-25 for a total of eight lanes. Straighten curves, widen shoulders, and improve the horizontal and vertical alignments. Build acceleration/deceleration lanes only at interchanges.	<ul style="list-style-type: none"> <li>✓ Provide 8 lanes on I-25 (4 in each direction)</li> <li>✓ Straighten curves on I-25</li> </ul>	
	<b>Six Lanes on I-25</b> Add two lanes (one in each direction) to I-25 for a total of six lanes. Straighten curves, widen shoulders, and improve the horizontal and vertical alignments.	<ul style="list-style-type: none"> <li>✓ Provide 6 lanes on I-25 (3 in each direction)</li> <li>✓ Straighten curves on I-25</li> </ul>	
	<b>Four lanes on I-25 with Continuous Acceleration/Deceleration Lanes</b> Keep I-25 four lanes (two lanes in each direction) and add continuous acceleration/deceleration lanes the entire length of I-25. Straighten curves, widen shoulders, and improve the horizontal and vertical alignments.	<ul style="list-style-type: none"> <li>✓ Shift I-25 east between 13th and Abriendo Street</li> <li>✓ Maintain 4 lanes on I-25 (2 lanes in each direction)</li> <li>✓ Bring existing highway up to current design standards</li> <li>✓ Straighten the curves on I-25</li> </ul>	
Transit Concept	<b>Concept*</b>	<b>Ideas from the Public</b>	
	<b>HOV Lanes on I-25</b> Build two High Occupancy Vehicle (HOV) carpool/bus lanes (one lane each direction) on I-25 and increase bus service throughout Pueblo. Improvements to I-25 would remain necessary to address safety and mobility problems on the highway.	<ul style="list-style-type: none"> <li>✓ Build carpool/bus lanes on I-25</li> <li>✓ Build HOV lanes on I-25</li> </ul>	

\*Transportation System Management and Travel Demand Management ideas were included in all of the concepts.

The remaining ideas did not become concepts but were addressed in the following manner:

- ❖ **Best Combined with Others.** Ninety-four ideas were placed into this category (which included solutions such as adding a left-turn bay at a particular intersection). While these ideas might improve local mobility and safety at a single location, the benefits from these improvements over the entire study area were minor unless combined with other ideas.
- ❖ **Amenities, Features, and Goals.** Thirty-five ideas fell into this category (which included items such as adding more landscaping, noise walls, and bicycle crossings). Separately, these ideas did not constitute stand-alone concepts. However, many of these ideas were eventually carried forward and included as features in the final Build Alternatives that resulted from the steps in the Alternatives Development Process.
- ❖ **Mobility between Pueblo and Other Destinations in Colorado.** Thirteen ideas were placed in this category. Some examples of these types of ideas included construction of a monorail between Denver and Pueblo and building a light rail line between Colorado Springs and Pueblo. These ideas were eliminated from further study and analysis because they would not improve local mobility or safety on I-25 within Pueblo, as stated in the Purpose and Need for this project.
- ❖ **Transportation System Management (TSM) and Travel Demand Management (TDM).** Eleven ideas fell into this grouping and included ideas such as improved signal timing, additional signage, adding/removing signals, and emergency pull-offs. These solutions alone would not meet the project Purpose and Need. As discussed in the *I-25 New Pueblo Freeway Alternatives Analysis and Project Development Report (Appendix A)*, many of these ideas have been included as enhancements to the alternatives because they will aid in slightly improved local mobility at the location specified but do not address corridor-wide capacity needs. Many of the TSM and TDM ideas fell outside of the project limits and were forwarded to the City of Pueblo and Pueblo County as the agencies responsible for the operation and maintenance of local roads other than I-25. Because the TSM and TDM ideas would

improve local mobility, they were included in all of the concepts and Build Alternatives.

**TDM** – Travel Demand Management is the art of influencing travel behavior for the purpose of reducing or redistributing travel demand. The primary purpose of TDM is to reduce the number of vehicles at a time using highway facilities while providing a wide variety of mobility options for those who wish to travel. Some examples of TDM include telecommuting, ridesharing, and alternative (flex) work schedules.

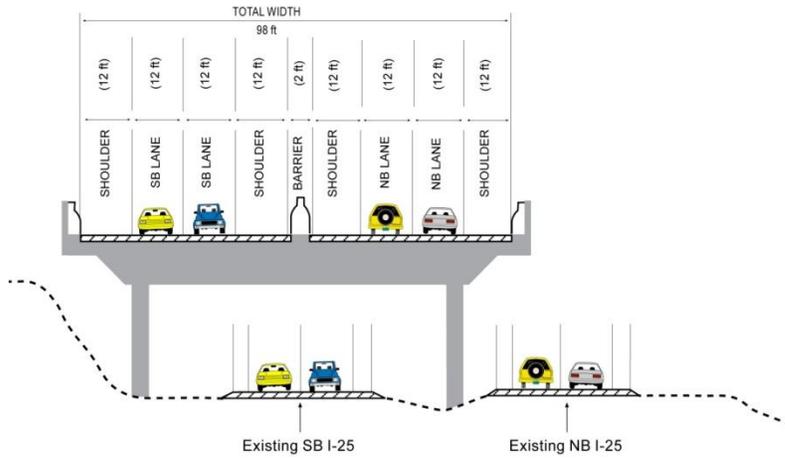
**TSM** – Transportation System Management is the improvement of vehicular flow by implementing low-cost measures that increase the efficiency of the existing road and avoid the need for major roadway expansion. There are four categories of improvements: 1) improve the efficiency of an existing highway network; 2) reduce vehicle use in congested areas; 3) improve transit services; and 4) improve internal transit management efficiency. TSM ideas include better signal synchronization. TSM improvements include Intelligent Transportation Systems (ITS), which use various technologies in an integrated fashion to improve the safety, efficiency, productivity, inter-modal connectivity, and inter-jurisdictional coordination of the roadway by managing traffic and incidents and providing traveler information. Examples of ITS include ramp meters, traffic cameras, and variable message signs.

## 2.5.2 Screening of Concepts

The nine major concepts shown and described in **Exhibits 2-5 through 2-13** were formed using the 19 ideas that resulted from the ideas screening and grouped as follows:

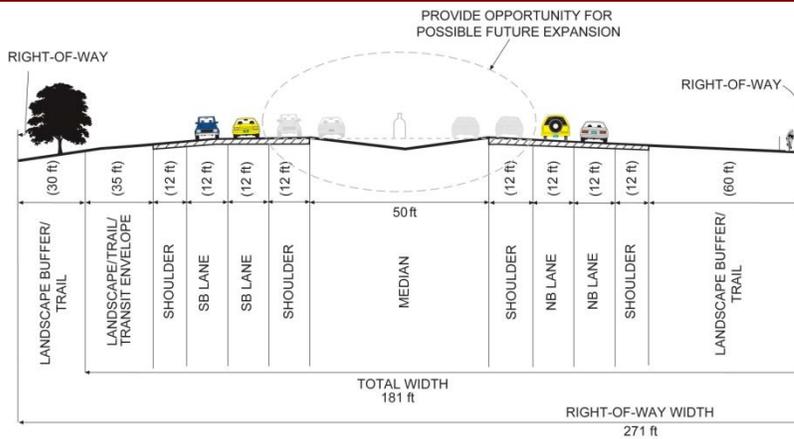
- ❖ Three Bypass Concepts
  - Double decking I-25
  - I-25 bypass east or west of Pueblo
  - Tunnel under existing I-25
- ❖ Two Alternate Route Concepts
  - Lower-speed alternate route
  - High-speed alternate route
- ❖ One Transit Concept
  - High-occupancy vehicle (HOV) lanes on I-25
- ❖ Three I-25 Improvement Concepts
  - Four lanes on I-25 with continuous acceleration/deceleration lanes
  - Six lanes on I-25
  - Eight lanes on I-25

## BYPASS CONCEPTS



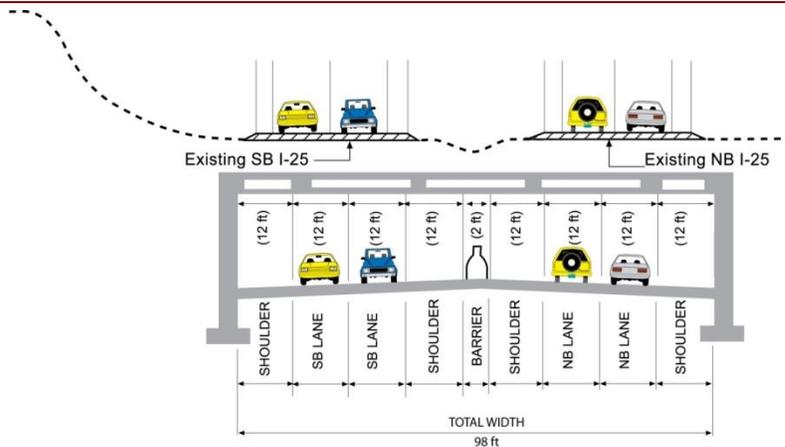
**1) EXHIBIT 2-5**  
Double Decking I-25

The second deck would be four lanes (two lanes each direction) for high-speed and limited access. Existing I-25 would function as it does today.



**2) EXHIBIT 2-6**  
I-25 Bypass

Build a high-speed bypass east or west of Pueblo. This new road would be four lanes (two lanes each direction) with limited access. Existing I-25 would function as it does today.

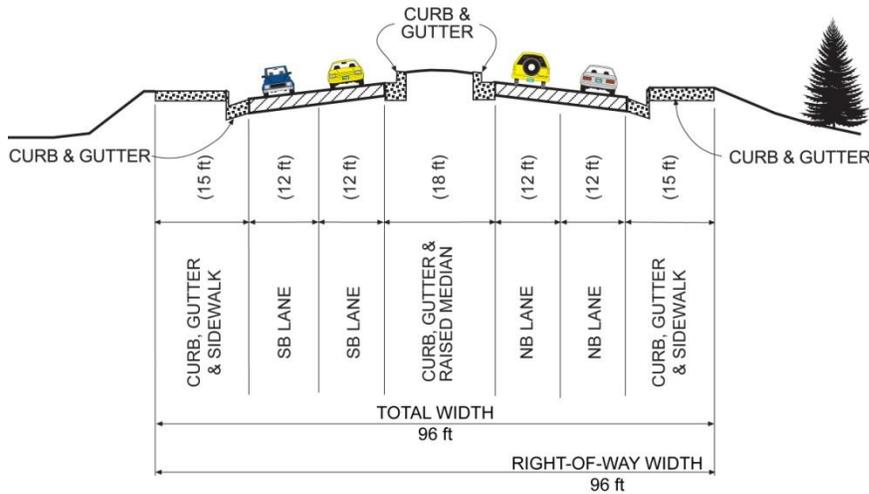


**3) EXHIBIT 2-7**  
Tunnel Under Existing I-25

The in-tunnel road would be four lanes (two lanes each direction) with limited access. The existing I-25 highway would become a lower-speed facility and would no longer be classified as an interstate.

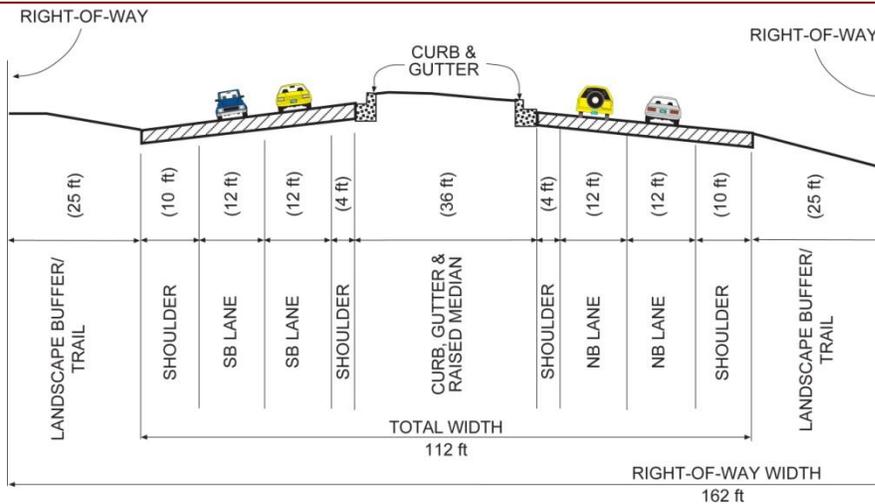
ft = feet; NB = Northbound; SB = Southbound

## ALTERNATE ROUTE CONCEPTS



**4) EXHIBIT 2-8**  
Lower-Speed Alternate Route

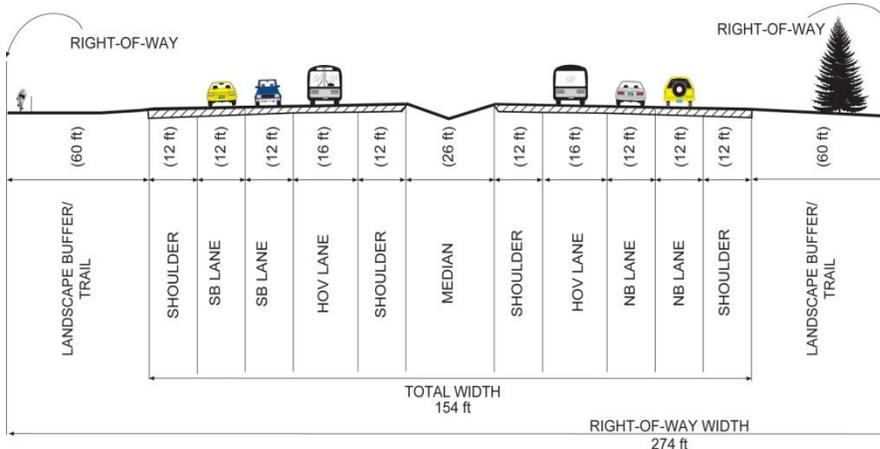
Build a lower-speed route around the City as a beltway that would serve local trips that would normally travel on I-25. This would be a new four-lane (two lanes each direction) road with a posted speed limit of 35 mph.



**5) EXHIBIT 2-9**  
High-Speed Alternate Route

Build a high-speed, limited access alternate route around the City with what is traditionally referred to as a beltway around Pueblo. This would be a new four-lane (two lanes each direction) highway with a posted speed limit of 55 mph.

## TRANSIT CONCEPT

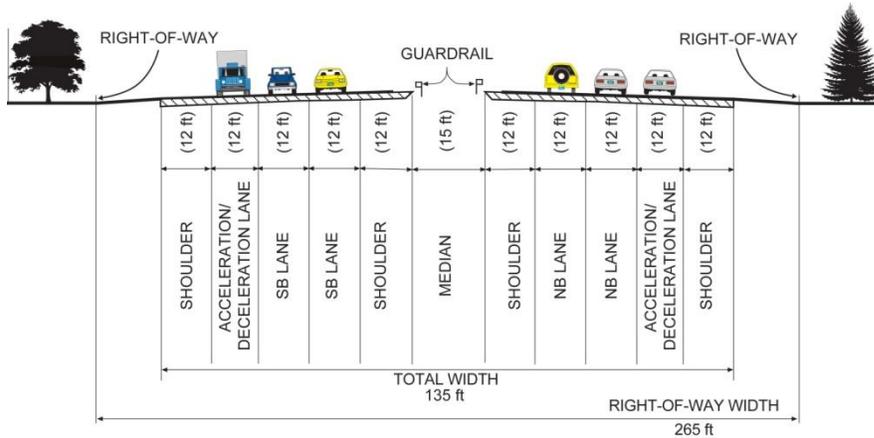


**6) EXHIBIT 2-10**  
HOV Lanes on I-25

Build two HOV lanes (one lane each direction) on I-25 and increase bus service throughout Pueblo. Improvements to I-25 would be necessary to address safety and local and regional mobility problems on the highway.

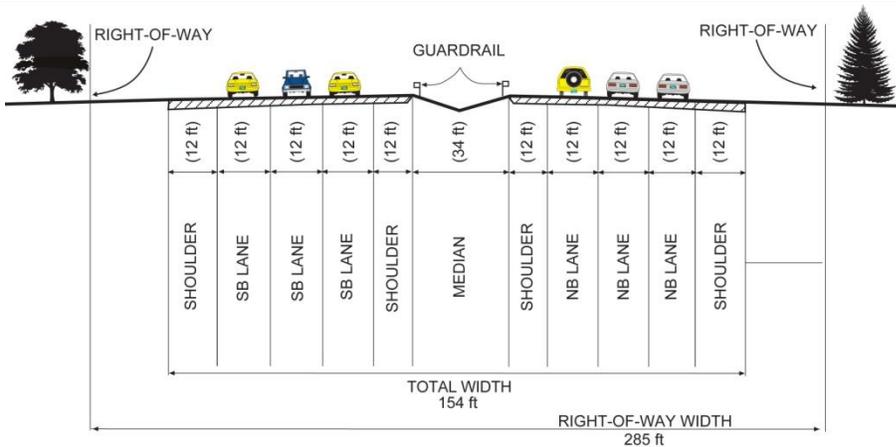
ft = feet; NB = Northbound; SB = Southbound; HOV = High Occupancy Vehicle

## I-25 IMPROVEMENT CONCEPTS



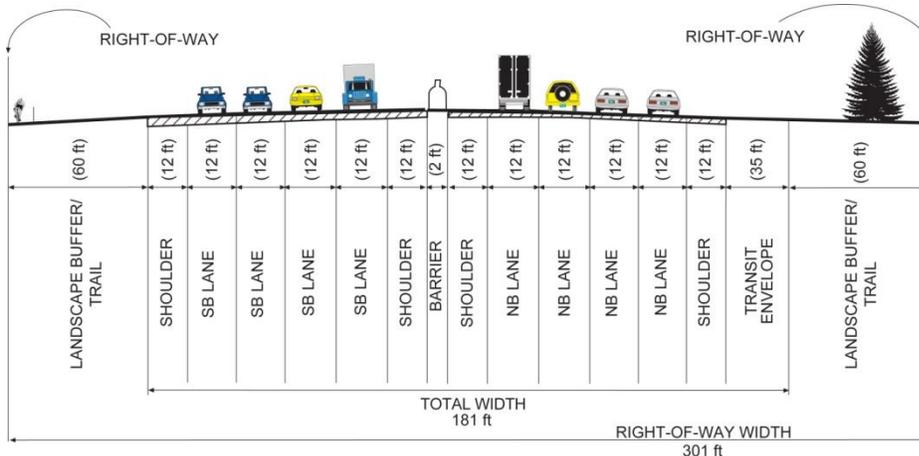
**7) EXHIBIT 2-11**  
Four Lanes on I-25 with Continuous Acceleration/ Deceleration Lanes

Keep I-25 at four lanes (two lanes each direction) and add continuous acceleration/ deceleration lanes the entire length of I-25. Straighten curves, widen shoulders, and improve the horizontal and vertical alignments. Build acceleration/deceleration lanes as needed between interchanges.



**8) EXHIBIT 2-12**  
Six Lanes on I-25

Add two lanes (one lane each direction) to I-25 for a total of six lanes. Straighten curves, widen shoulders, and improve the horizontal and vertical alignments. Build acceleration/deceleration lanes only at interchanges.



**9) EXHIBIT 2-13**  
Eight Lanes on I-25

Add four lanes (two lanes each direction) to I-25 for a total of eight lanes. Straighten curves, widen shoulders, and improve the horizontal and vertical alignments. Build acceleration/ deceleration lanes only at interchanges.

ft = feet; NB = Northbound; SB = Southbound

The nine major concepts described and illustrated in **Exhibits 2-5 through 2-13** were evaluated by the CDOT Project Team and the stakeholders using the evaluation criteria listed in **Exhibit 2-14**. The concepts were ranked based on how well they met the evaluation criteria. A full description of how the concepts were developed and screened is included in the *I-25 New Pueblo Freeway Alternatives Analysis and Project Development Report* (see **Appendix A**).

**Exhibit 2-15** shows how each concept ranked among other related concepts and briefly describes the strengths and weaknesses of each concept. Four of the nine concepts were eliminated because they failed to meet the Purpose and Need, and the remaining concepts were further developed into five strategies that are illustrated in **Exhibits 2-17 through 2-21**. The results of the evaluation and screening are summarized below.

Once ranked, the remaining concepts and their elements were re-organized into the following six strategies:

- ❖ No-Action
- ❖ I-25 Safety Improvements
- ❖ I-25 Safety Improvements with a Low-Speed Loop
- ❖ Relocate I-25 East or West of Pueblo with a Parkway
- ❖ Relocate I-25 East or West of Pueblo with a Highway
- ❖ Improve I-25 with Six Lanes and a Low-Speed Loop

The six strategies represent combinations of concepts that support each other and strengthen the weaknesses of a single concept. The ranking of each concept was used as an aid to determine which concepts best complemented one another.

**Exhibit 2-16** illustrates the concepts used to develop each of the six strategies. The strategies are illustrated in **Exhibits 2-17 through 2-21**

### 2.5.3 Screening of Strategies

Evaluation of the six strategies occurred during strategy screening. The No Action strategy includes only the transportation improvements that are already programmed in the 20-year, *Pueblo Area 2035 Long Range Transportation Plan* (PACOG, 2008). There would be no major transportation projects on I-25 between 29th Street and Pueblo Boulevard; therefore, an illustration of the No Action strategy is not included. The other five strategies are described and illustrated in **Exhibits 2-17 through 2-21**. These strategies were screened using the Purpose and Need and evaluated in a quantitative rather than qualitative way the evaluation and screening resulted in selection of a transportation corridor. The locations and types of interchanges were evaluated in detail after the screening of strategies as the next step in alternative development, as detailed in Section 2.5.4 Interchanges.

**EXHIBIT 2-14**  
Criteria Used for Evaluation of Nine Concepts

Community Values	Environmental Resources	Mobility and Safety	Implementation
<ul style="list-style-type: none"> <li>➤ How well does this concept support current economic community investments?</li> <li>➤ Does this concept provide new transportation options and flexibility?</li> <li>➤ Will this concept have community support?</li> </ul>	<ul style="list-style-type: none"> <li>➤ Can this be built within the existing road ROW?</li> <li>➤ How well does this support Pueblo's environmental values regarding the natural and man-made environments?</li> </ul>	<ul style="list-style-type: none"> <li>➤ Is travel time on I-25 improved?</li> <li>➤ Does this improve access to major destinations throughout Pueblo?</li> <li>➤ Does this concept eliminate existing physical barriers to mobility, such as roads or railroad tracks?</li> <li>➤ Does this concept improve high accident locations?</li> </ul>	<ul style="list-style-type: none"> <li>➤ How easy is this to construct while maintaining traffic during construction?</li> <li>➤ Would maintenance costs be decreased with this concept?</li> <li>➤ Is this concept consistent with existing agency plans and policies?</li> <li>➤ What is the capital cost of this concept?</li> <li>➤ How consistent is this with national design guidelines?</li> </ul>

**EXHIBIT 2-15**  
 Evaluation Results for Screening of Nine Concepts

Concept	Ranking	Strengths and Weaknesses and Reasons for Ranking	Screening Results
<b>BYPASS CONCEPTS</b>			
Double Decking I-25	Eliminated	<p>This project would be built within the existing roadway ROW and, once constructed, would improve travel time on I-25.</p> <p>This concept would not support environmental and community values; it does poorly in improving local mobility because it would limit access to I-25 and the local road network during and after construction due to the significant elevation differences.</p> <p>Implementation of this concept would be extremely difficult because I-25 would be closed during construction and, given the narrow highway ROW, no temporary lanes could be constructed to keep traffic traveling on I-25.</p> <p>Because of the potential for significant visual impacts, this concept had strong community opposition. Furthermore, this concept would not reflect the culture, history, and character of Pueblo, as is stated in the Community Vision.</p>	<p>This concept was eliminated from further consideration because it could not meet the local mobility needs as stated in the Purpose and Need. I-25 would become more of a physical barrier to local mobility than it is today because it would limit access to and from I-25 and the local road network during and after construction due to the significant elevation differences.</p>
I-25 Bypass East or West of Pueblo	1	<p>A bypass around Pueblo would provide new travel options. It would be easy to construct because existing I-25 traffic would not have to be rerouted. The new road could be designed consistent with national design guidelines.</p> <p>A bypass around Pueblo scored poorly in the environmental category. Significant ROW would be required in open, undeveloped natural areas. A bypass does not support economic community investments. It would not improve access to major destinations, and it would not be consistent with local or regional plans.</p>	<p>Bypasses were incorporated into strategies and carried forward in the analyses.</p>
Tunnel Under Existing I-25	Eliminated	<p>A tunnel would be built within the existing highway ROW and, once constructed, would improve travel time on I-25.</p> <p>Mineral Palace Park and Fountain Creek would be heavily impacted during construction. Rerouting of I-25 traffic or construction of a parallel roadway during construction would be problematic for the entire length of the project.</p> <p>Implementation of this concept would be extremely difficult because I-25 would be closed during construction and, given the narrow highway ROW, no temporary lanes could be constructed.</p> <p>A tunnel would have engineering challenges because of the high water table next to the Arkansas River. Maintaining I-25 traffic while constructing a tunnel under I-25 would not be possible without constructing a roadway parallel with I-25.</p>	<p>This concept was eliminated from further consideration because it could not meet the local mobility needs as stated in the Purpose and Need. It would not improve access to destinations within Pueblo because access to the highway would be limited.</p>

**EXHIBIT 2-15**  
Evaluation Results for Screening of Nine Concepts

Concept	Ranking	Strengths and Weaknesses and Reasons for Ranking	Screening Results
<b>ALTERNATE ROUTE CONCEPTS</b>			
Lower-Speed Alternate Route	1	<p>This concept would provide a safe and continuous way around the city that would improve access to major destinations and eliminate barriers to local mobility. It supports the economic community investments and would provide new transportation options. A lower-speed alternate route is consistent with local plans and with national design guidelines.</p> <p>There would be some degree of inconsistency with environmental values since some of the route would require new ROW. As a stand-alone concept, this would not include the safety and local and regional mobility improvements needed on I-25.</p>	A lower-speed alternate route was incorporated into a strategy and carried forward in the analyses.
High-Speed Alternate Route	2	<p>This concept would provide a safe and continuous way around the City. A high-speed alternate route would have limited access; therefore, travel time would be improved. It would support the economic community investments and would provide new transportation options, but not to the level that the lower-speed alternate route would.</p> <p>A high-speed alternative would be focused on the needs of the regional traveler, although less than half of the vehicles that currently use I-25 in the Pueblo region are “through” trips (having origins and destinations outside of the city limits).</p> <p>There would be some degree of inconsistency with environmental values since some of the route would require new ROW. As a stand-alone concept, this would not include the safety and local and regional mobility improvements needed on I-25.</p> <p>This concept has similar strengths and weaknesses as the lower-speed alternate route concept; however, it did not score as high in the local mobility criteria as the lower-speed concept because of reduced local access.</p>	A high-speed alternative route was incorporated into a strategy and carried forward in the analysis.
<b>TRANSIT CONCEPT</b>			
HOV lanes on I-25	Eliminated	<p>HOV lanes support economic investments, provide new transportation options, provide access to major destinations, and are consistent with local plans.</p> <p>HOV lanes only address regional mobility issues on I-25 for the estimated 14% of carpoolers in the region due to the requirement that only HOVs could use the lanes (PACOG, 2008). The large percentage of remaining interstate users would still experience insufficient capacity in the non-HOV lanes.</p>	This concept was eliminated from further consideration because it could not meet the regional mobility and capacity needs as stated in the Purpose and Need. The lower demand for transit services on I-25 would not make this option feasible to meet travel demands. The analysis did reveal local mobility and accessibility improvements from improvements to transit service off of I-25; therefore, this element was included in all strategies developed.

**EXHIBIT 2-15**  
Evaluation Results for Screening of Nine Concepts

Concept	Ranking	Strengths and Weaknesses and Reasons for Ranking	Screening Results
<b>I-25 IMPROVEMENT CONCEPTS</b>			
Four Lanes on I-25 with Continuous Acceleration/Deceleration Lanes	2	<p>Of the three I-25 improvement concepts, this concept would require the least amount of ROW. Construction would result in improvements to existing high-accident locations.</p> <p>The regional mobility benefits of this concept were much less than widening I-25. This concept scored poorly in community values because it does not meet future capacity needs, regional and local mobility because it does not eliminate barriers to east-west mobility, and implementation criteria because no temporary lanes are available during construction, putting it second in the rankings behind the six lanes on I-25 concept.</p>	<p>The strengths of this concept allowed the four lanes on I-25 concept to be incorporated into a strategy and carried forward in the analyses. A detailed traffic operations analysis to determine the number of lanes (four or six) required to satisfy capacity needs was deferred until the screening of strategies.</p>
Six Lanes on I-25	1	<p>This concept would improve safety by addressing high-accident locations. Travel time and access to major destinations is improved. This concept does the best in supporting economic community investments and is consistent with existing local and state plans.</p> <p>Because of highway widening, this concept ranked low in supporting environmental values and in eliminating barriers to east-west local mobility.</p>	<p>The six lanes on I-25 concept was incorporated into a strategy and carried forward in the analyses. A detailed traffic operations analysis to determine the number of lanes (four or six) required to satisfy capacity needs was deferred until the screening of strategies.</p>
Eight Lanes on I-25	Eliminated	<p>Widening I-25 to eight lanes improved the travel time and access to major destinations.</p> <p>This concept scored poorly in its ability to be built in the existing ROW and in its support of environmental values, as additional ROW needs would impact surrounding communities.</p> <p>The magnitude of environmental disturbance would not be consistent with Pueblo citizens' desire to protect natural and man-made environments to the extent possible.</p>	<p>Increasing the capacity of I-25 to this degree exceeds the need for regional mobility and capacity as described in the Purpose and Need for the project.</p>

Source: CDOT Project Team, 2010.

HOV = high-occupancy vehicle

I-25 = Interstate 25

ROW = right-of-way

**EXHIBIT 2-16**  
Strategies Developed from Concepts

Concepts	Strategies
A concept was not developed for a No Action strategy	No Action
Four Lanes on I-25 with Continuous Acceleration/Deceleration Lanes	I-25 Safety Improvements
Four Lanes on I-25 with Continuous Acceleration/Deceleration Lanes Low-Speed Alternate Route	I-25 Safety Improvements with a Low-Speed Loop
I-25 Bypass East or West of Pueblo	Relocate I-25 East or West of Pueblo and Existing I-25 Becomes a Parkway
I-25 Bypass East or West of Pueblo High-Speed Alternate Route	Relocate I-25 East or West of Pueblo and Existing I-25 is Maintained as a Highway
Six Lanes on I-25 Lower-Speed Alternate Route	Improve I-25 with Six Lanes and a Low-Speed Loop

Source: CDOT Project Team, 2010.

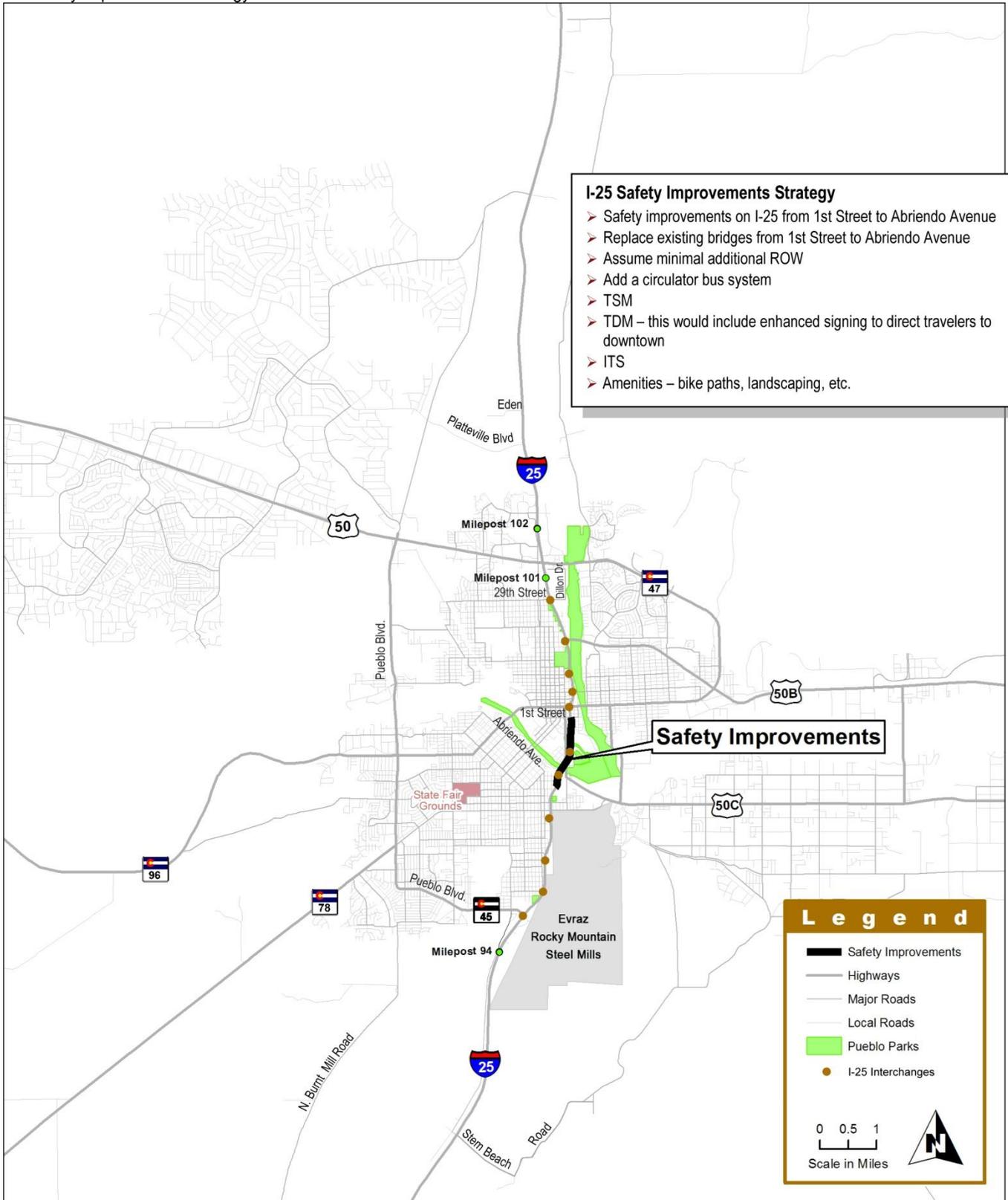
I-25 = Interstate 25

The evaluation criteria listed in **Exhibit 2-22** were applied to each of the six alternative strategies to identify their strengths and weaknesses, which are summarized in **Exhibit 2-23**. The No Action strategy was retained because it serves as a baseline for comparison of the Build Alternatives. A detailed traffic analysis was completed to determine if each strategy provided adequate capacity to meet projected capacity needs as stated in the Purpose and Need. The analysis showed that safety improvements without additional capacity were not sufficient to address congestion on I-25. More information on the results of the traffic analysis is included in the *I-25 New Pueblo Freeway Alternatives Analysis and Project Development Report (Appendix A)*.

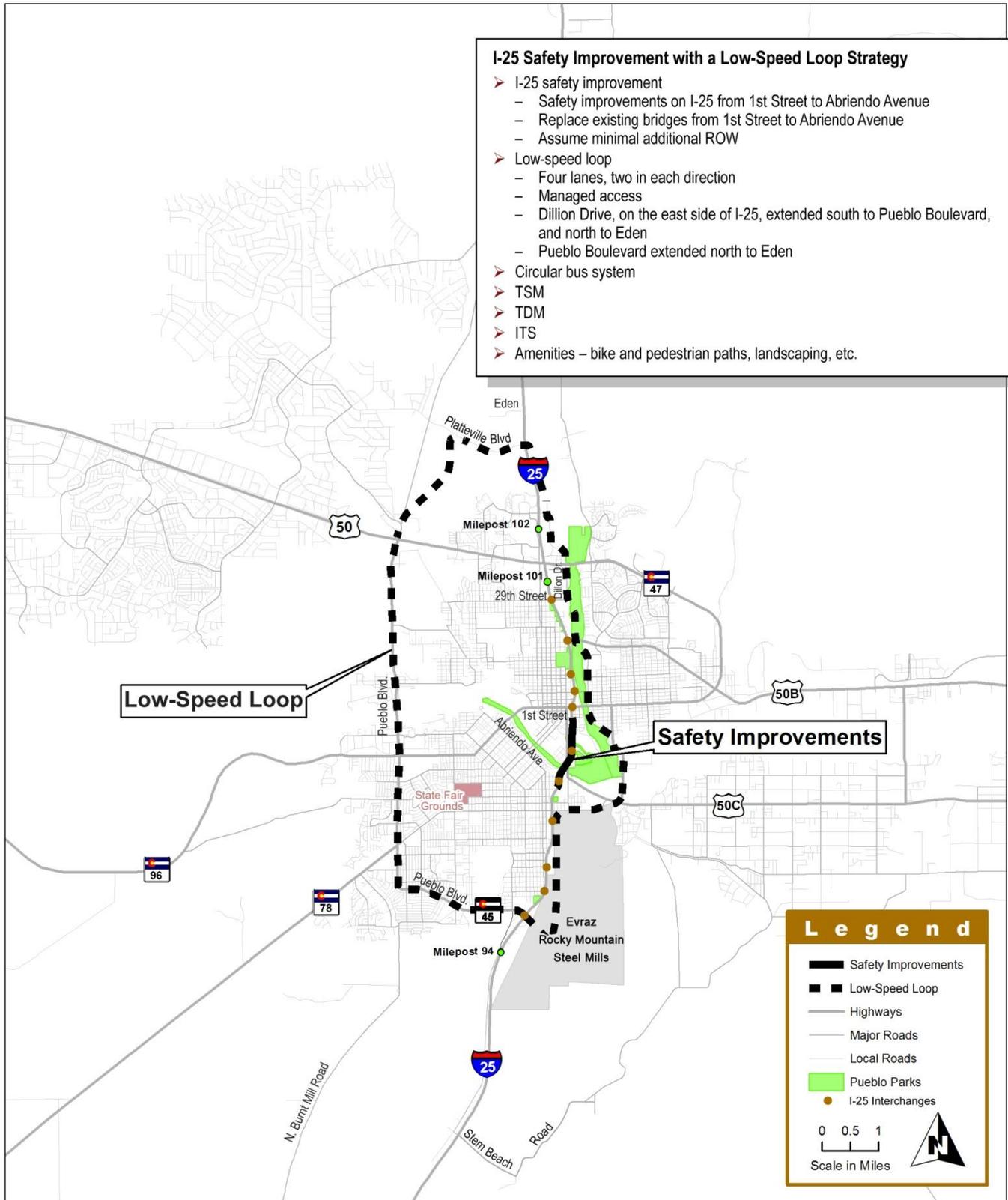
Except for one build strategy, all strategies were eliminated from further study because they failed to meet the Purpose and Need. The reasons for elimination are also included in **Exhibit 2-23**.

The result of the analysis led to the selection of Alternative Strategy 6: Improve I-25 with Six Lanes and provide a Low-Speed Loop. Strategy 6 underwent further refinement by the CDOT Project Team and the stakeholders and became one of the final Build Alternatives, referred to as the “Existing I-25 Alternative.” One refinement was to reduce the Low-Speed Loop to the extension of Dillon Drive south to US 50B. The No Action strategy was also retained because it serves as a baseline for comparison of the Build Alternatives.

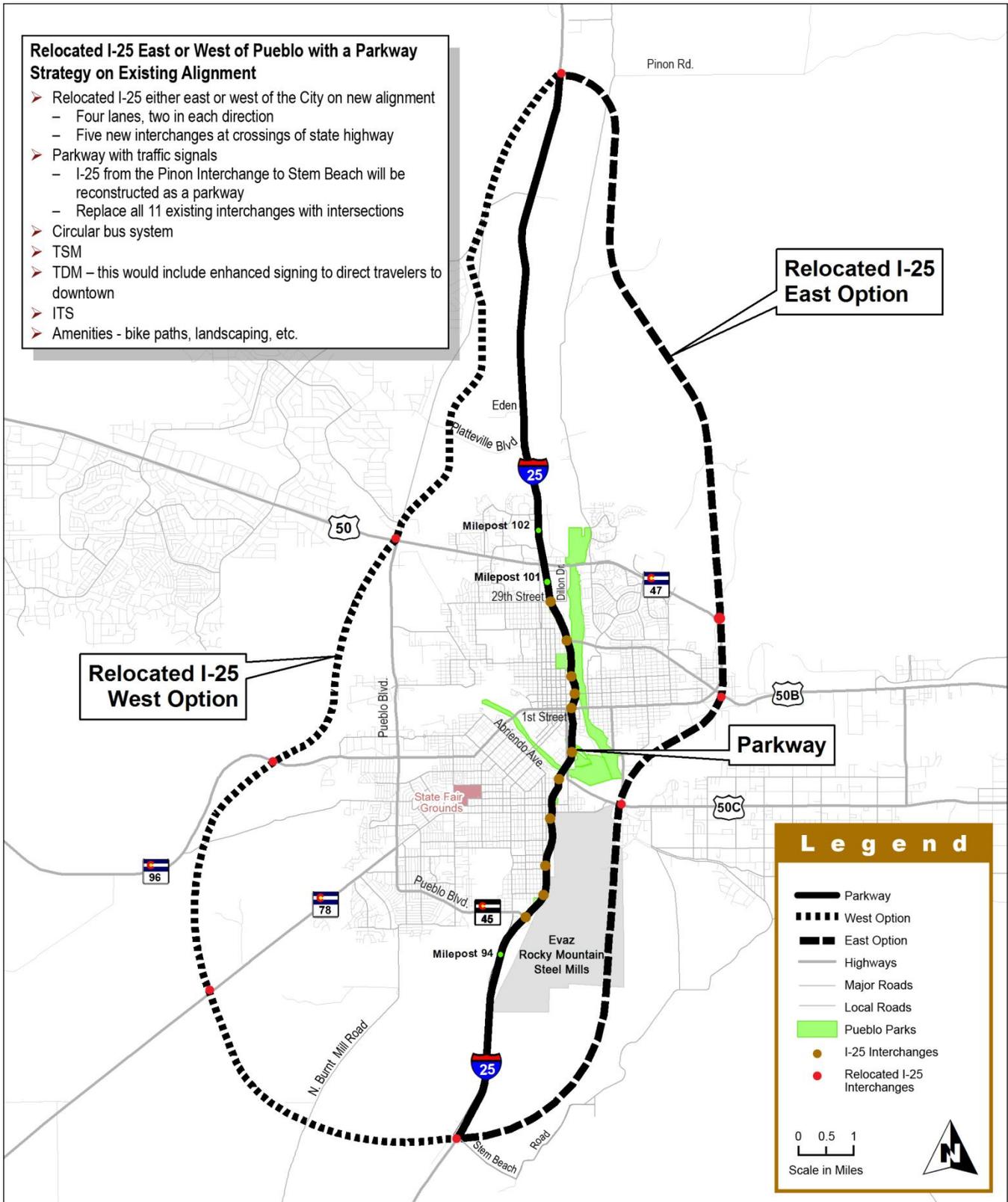
**EXHIBIT 2-17**  
**I-25 Safety Improvements Strategy**



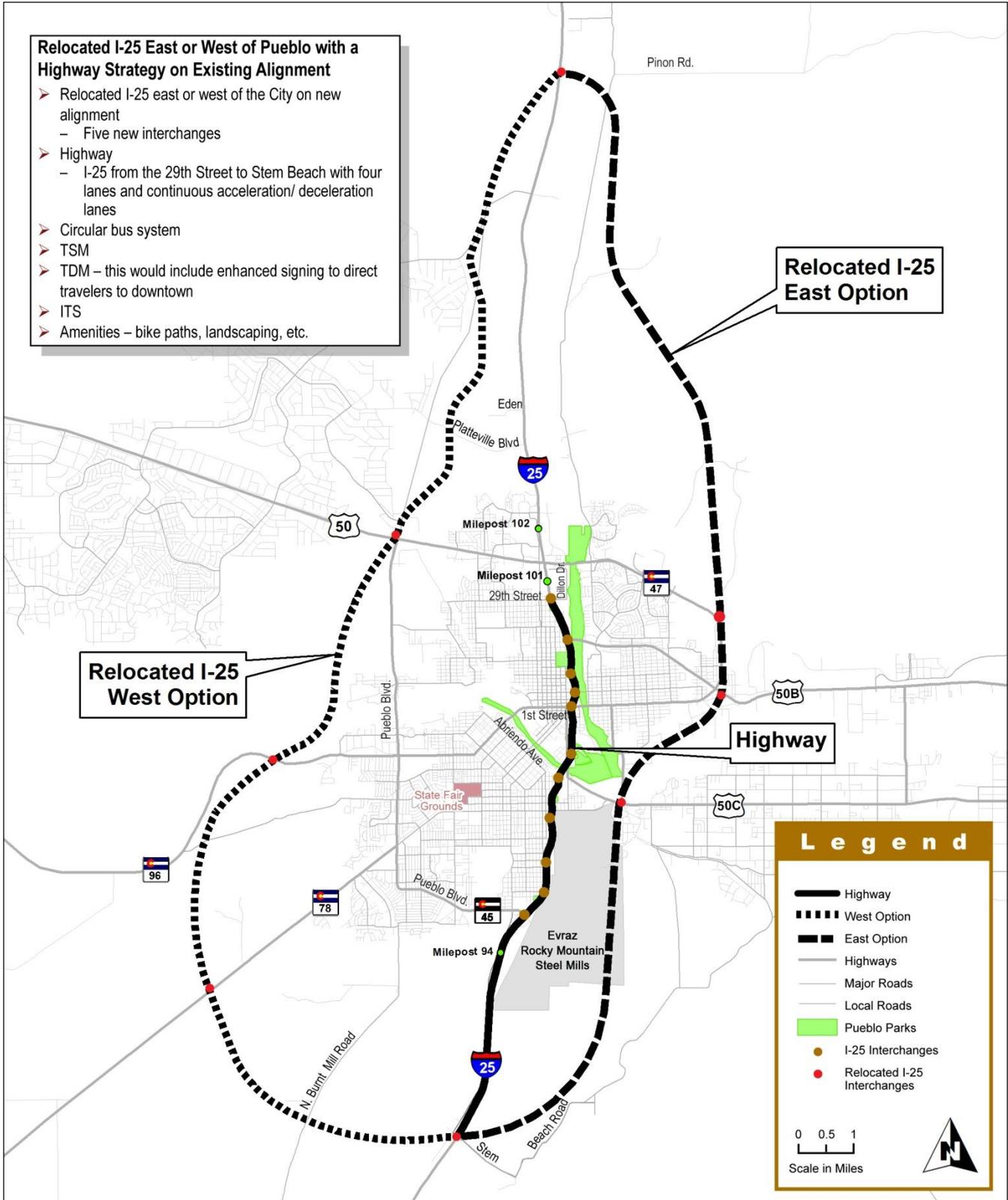
**EXHIBIT 2-18**  
**I-25 Safety Improvements with a Low-Speed Loop Strategy**



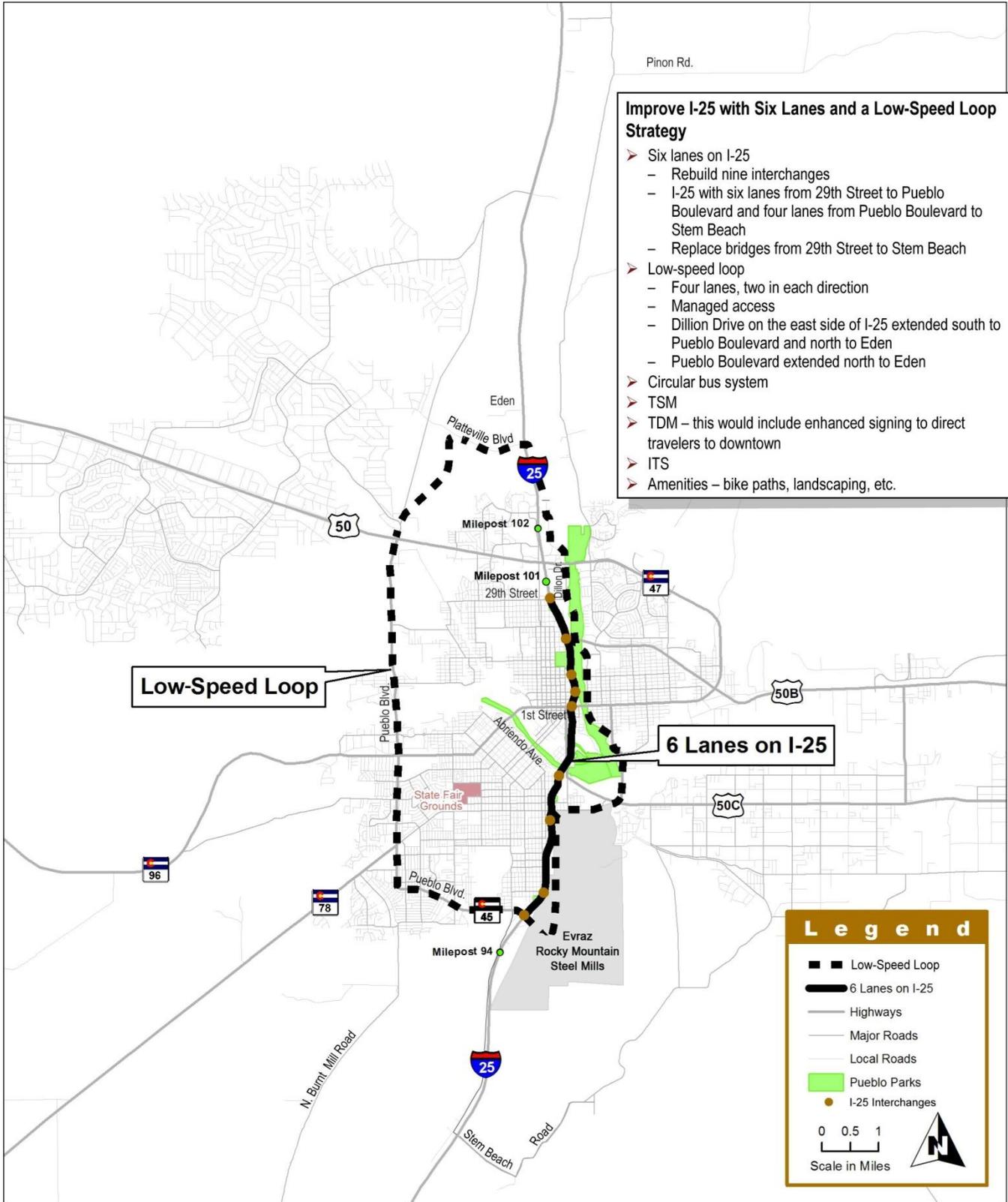
**EXHIBIT 2-19**  
 Relocated I-25 East or West of Pueblo with a Parkway Strategy



**EXHIBIT 2-20**  
 Relocated I-25 East or West of Pueblo with a Highway Strategy



**EXHIBIT 2-21**  
 Improve I-25 with Six Lanes and a Low-Speed Loop Strategy



**EXHIBIT 2-22**  
Criteria for Evaluation of Strategies

Community Values	Environmental Resources	Mobility and Safety	Implementation
<ul style="list-style-type: none"> <li>➤ Is it compatible with neighborhood and local business plans/ goals/objectives?</li> <li>➤ Does it promote local trips on local roads and regional trips on I-25?</li> <li>➤ Does it support current and ongoing economic investments in the community?</li> </ul>	<ul style="list-style-type: none"> <li>➤ How much new ROW would be needed?</li> <li>➤ How many houses/ businesses would be within the new ROW?</li> <li>➤ What could be the long-term impacts to the natural and man-made environment?</li> </ul>	<ul style="list-style-type: none"> <li>➤ What would be the level of service in the PM peak?</li> <li>➤ What would be the travel time on I-25 between Stem Beach Road and Pinon Road?</li> <li>➤ What would the I-25 traffic volumes be?</li> <li>➤ Does it improve high accident locations?</li> </ul>	<ul style="list-style-type: none"> <li>➤ What is the comparative cost?</li> <li>➤ What are the additional operation and maintenance costs?</li> <li>➤ Does it have a major agency or legislative hurdle?</li> <li>➤ Can it be implemented in segments that are functional and fundable?</li> </ul>

**EXHIBIT 2-23**  
Evaluation Results of Screening of Six Strategies

Alternative Strategy	Strengths and Weaknesses	Screening Results
1. No Action (retained)	This strategy was retained because it serves as a baseline for comparison of the Build Alternatives.	
2. I-25 Safety Improvements (eliminated)	<p>This strategy has low capital costs and reduces accident rates between 1st Street and Abriendo Avenue. There would only be a few environmental impacts due to the minimal need for ROW acquisition.</p> <p>This strategy scored poorly on community values and travel time. This strategy does very little to address regional mobility problems on I-25. It does not address safety on I-25 north of 1st Street or south of Abriendo Avenue because those areas are not part of this strategy. This strategy is not compatible with local plans and does not support future economic community investments as stated in the Community Vision.</p>	<p>This strategy was eliminated from further consideration because it does not provide adequate capacity to meet projected capacity needs as stated in the Purpose and Need. Interchanges would remain unconnected to appropriate City streets, and conflicts with local and regional travel would still exist, which are stated as needs in the Purpose and Need. Local mobility would not be improved because this strategy does not promote local trips on local roads.</p> <p>Safety problems north of 1st Street and south of Abriendo Avenue, identified in <b>Chapter 1 – Purpose and Need</b> and <b>Exhibit 1-5</b>, are not addressed by this strategy.</p>
3. I-25 Safety Improvements with a Low-Speed Loop (eliminated)	<p>This strategy has medium capital costs, improves safety between 1st Street and Abriendo Avenue, and slightly improves regional and local mobility on I-25 by providing another route for local trips on the Low-Speed Loop. Having an alternate local route also slightly reduces local trips on I-25, thus reducing local and regional traffic conflicts and providing a minimal safety benefit.</p> <p>This strategy does not address safety on I-25 north of 1st Street or south of Abriendo Avenue. New ROW would be required along the length of the Low-Speed Loop. To implement this strategy would require restricting access in places where access exists today.</p>	<p>This strategy was eliminated from further consideration because it does not provide adequate capacity to meet projected capacity needs as stated in the Purpose and Need. I-25 interchanges would remain unconnected to appropriate City streets and aging bridges would not be replaced. Therefore, limited safety and local mobility improvements are realized with this strategy.</p> <p>Safety problems north of 1st Street and south of Abriendo Avenue, identified in <b>Chapter 1 – Purpose and Need</b>, <b>Exhibit 1-5</b>, are not addressed by this strategy.</p>

**EXHIBIT 2-23**

Evaluation Results of Screening of Six Strategies

Alternative Strategy	Strengths and Weaknesses	Screening Results
	<p>This strategy is not compatible with local plans (e.g., neighborhoods are not reconnected). It does not support existing economic community investments, and I-25 would still experience congested conditions in several locations.</p>	
<p>4. Relocate I-25 East or West of Pueblo and Existing I-25 Becomes a Parkway (eliminated)</p>	<p>CDOT would continue to own and maintain I-25. If it was relocated to the east or the west of Pueblo, the existing I-25 would become a parkway owned and maintained by the City. This strategy would separate local and regional trips, with local trips on the parkway and regional trips on the relocated highway. This strategy has a very high capital cost due to the extensive construction for a brand new highway. It would require significant ROW acquisition for the relocated I-25. This strategy scored poorly on community values because traffic would be bypassing downtown. There would be no ability to phase improvements and achieve incremental benefits. The entire I-25 bypass would have to be constructed before the existing I-25 could be converted to a parkway.</p> <p>A bypass west of the City would add 24 miles of new highway, and a bypass east of the City would add 22 new miles. Each of these bypasses would be a new highway that would impact undisturbed natural areas; would not be compatible with neighborhood and local business plans, goals, and objectives; and would not support ongoing economic investments in the community.</p> <p>Conversion of I-25 to a parkway would require CDOT to transfer ownership of the parkway to the City. However, the City would not agree to assume ownership and maintain the parkway.</p> <p>Relocating I-25 east or west of Pueblo would impact the current economic structure of the City. Bypassing downtown and community investments such as the new HARP project, the Art Museum, and the Convention Center was believed to be potentially damaging to these facilities. Local goals and objectives, as stated in the Community Vision, would not be met by this strategy.</p>	<p>This strategy was eliminated because the relocation of I-25 outside of the City would not address the safety and local mobility problems on the future parkway (existing I-25), including the deteriorating roadway and bridges and inappropriate connections to local streets, as stated in the Purpose and Need.</p>
<p>5. Relocate I-25 East or West of Pueblo and Existing I-25 is Maintained as a Highway (eliminated)</p>	<p>This strategy would involve making improvements to shoulders, lengthening on/off ramps, and making improvements to interchanges on the existing I-25, all of which would improve safety. Improvements would be made to aging bridges, congestion would be reduced, and there would be fewer conflicts with local and regional travel. Therefore, some of the regional mobility problems would be addressed on I-25.</p> <p>This strategy has extremely high capital costs due to the extensive construction needed for a brand new highway. A significant amount of ROW, including undeveloped land, would have to be purchased. Local trips would still be in conflict with regional travelers.</p> <p>A bypass west of the City would add 24 miles of new highway, and a bypass east of the City would add</p>	<p>This strategy was eliminated because it would not improve safety by addressing existing I-25 deteriorating roadway and bridges or by addressing non-standard road characteristics of I-25, as stated in the Purpose and Need.</p>

**EXHIBIT 2-23**

Evaluation Results of Screening of Six Strategies

Alternative Strategy	Strengths and Weaknesses	Screening Results
	22 new miles. Each of these bypasses would be a new highway that would impact undisturbed natural areas; would not be compatible with neighborhood and local business plans, goals, and objectives; and would not support ongoing economic investments in the community.	
6. Improve I-25 with Six Lanes and a Low-Speed Loop (retained)	This strategy was chosen by the CDOT Project Team and the stakeholders as the best of the six strategies. This strategy scored high with community values criteria and can be implemented in segments that are functional and fundable.	This strategy was retained because it best addresses the safety problems and local and regional mobility issues identified in <b>Chapter 1 – Purpose and Need</b> . Additionally, this strategy meets the projected capacity needs as outlined in the Purpose and Need. After selection of this strategy, it was refined to reduce the low-speed loop to an extension of Dillon Drive south to US 50B.

Source: CDOT Project Team, 2010

CDOT = Colorado Department of Transportation  
I-25 = Interstate 25

HARP = Historic Arkansas Riverwalk of Pueblo  
ROW = right-of-way

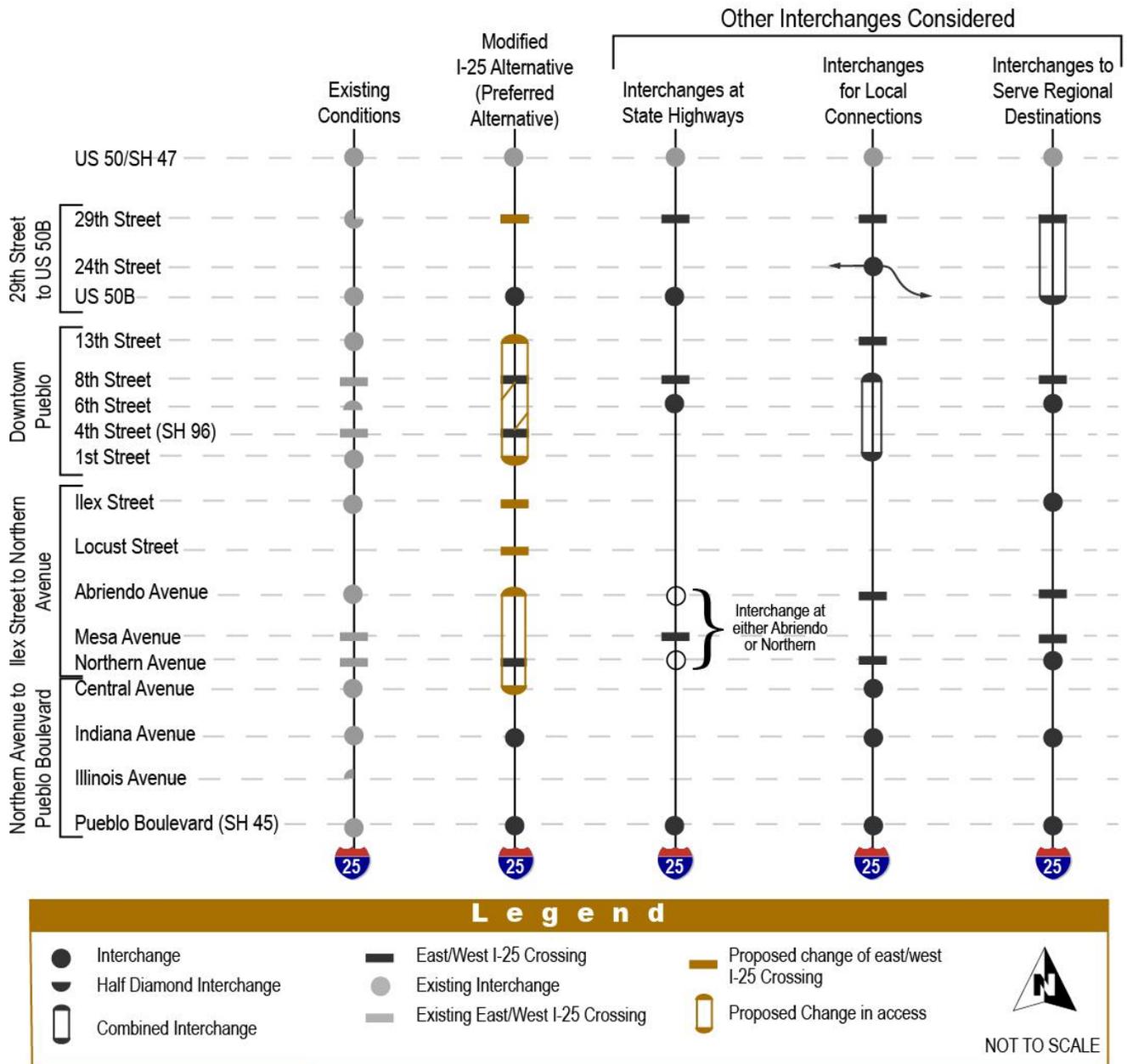
**2.5.4 Interchanges**

With the general corridor location for I-25 determined at the end of screening of strategies, the Alternatives Development Process proceeded with the CDOT Project Team and the stakeholders studying the best interchange types and locations. The number of existing interchanges (11 in all) through the study area needed to be reduced because of their close proximity to each other. Current design standards recommend spacing of the interchanges to be at 1-mile intervals. In some instances, interchanges needed to be relocated. It was essential to achieve a balance of meeting the needs of Pueblo travelers without reducing the safety and efficiency of the interstate by maintaining numerous access points. The recommended interchange types and locations are a result of consensus

between the project leadership teams (PLT and TLT) and community stakeholders.

The interchange study process began with consideration of three major interchange systems, illustrated in **Exhibit 2-24**: 1) Interchanges at State Highways, 2) Interchanges for Local Connections, and 3) Interchanges for Regional Destinations. For each system, general locations of interchanges with I-25 and the local roadway network were considered based on categories of need that interchanges normally serve. These systems were presented to the stakeholders through a series of public meetings, and a variety of interchange types and locations were evaluated using criteria that measured community values, environmental resources, local and regional mobility and safety, and implementation (see **Exhibit 2-25**).

**EXHIBIT 2-24**  
Interchange System Analysis



**EXHIBIT 2-25**

Criteria for Evaluation of Interchange Systems

Community Values	Environmental Resources	Mobility and Safety	Implementation
<ul style="list-style-type: none"> <li>➤ How well does it support current and ongoing economic community investments? Will it have community support?</li> <li>➤ Can it be easily signed?</li> <li>➤ Is it compatible with neighborhood and local business plans, goals, and objectives?</li> </ul>	<ul style="list-style-type: none"> <li>➤ How much new ROW would be needed?</li> <li>➤ How many houses and businesses would be within the new ROW?</li> </ul>	<ul style="list-style-type: none"> <li>➤ Does it connect with the east-west State Highways?</li> <li>➤ Does it serve major interstate trip purposes such as industrial, recreational, central business district, and major employers?</li> <li>➤ Does it serve motorists who come from outside of the City to destinations within Pueblo?</li> <li>➤ Is interchange spacing adequate?</li> <li>➤ Does it improve high-accident locations?</li> </ul>	<ul style="list-style-type: none"> <li>➤ Is it consistent with national design guidelines?</li> <li>➤ What is the comparative cost?</li> <li>➤ How difficult is it to construct?</li> <li>➤ How difficult is it to maintain local traffic during construction?</li> </ul>

A description of each interchange type and location considered and the detailed results of the interchange system evaluation are described in the *I-25 New Pueblo Freeway Alternatives Analysis and Project Development Report*, included in **Appendix A**. A summary of the evaluation, by location, is provided below. The interchange evaluation was completed for each of the alternatives to be fully evaluated in the FEIS.

**29th Street to SH 50B**

This segment of I-25 is constrained by interchange spacing requirements, residential neighborhoods to the west, the Fountain Creek Floodplain and Park Land to the east, and the need to maintain a high level of access east to west from 29th Street to US 50B. Five interchange types were considered in this segment. A diamond interchange at US 50B with one-way frontage roads to 29th Street was recommended for this location because it maintains highway access to 29th Street via US 50B frontage roads while also adhering to interchange spacing requirements. This configuration also minimizes ROW impacts associated with the other interchange types considered at this location.

**Downtown Pueblo**

This segment of I-25 is constrained by interchange spacing requirements, Mineral Palace Park’s proximity to the interstate, the need to support and optimize interstate access to the downtown business and commercial center, and the need to improve east-west connectivity. Four interchange types were considered in this segment to balance the constraints noted above while providing a connection to the State Highway at 4th Street (which is also SH 96) and access to various other destinations in downtown Pueblo. The recommended interchange type was a split-diamond interchange between 13th Street and 1st Street, which included one-way frontage roads between 13th Street and 1st Street and additional exit ramps at approximately 6th Street. This interchange type was selected because it maximizes access to destinations within downtown Pueblo; supports east-west connectivity at 13th Street, 5th Street, 4th Street, and 1st Street; and provides a critical connection to 13th Street, which was identified by the community as an important gateway into downtown Pueblo. Additional exit ramps were provided at 6th Street to alleviate traffic congestion on the split-diamond off-ramps. The addition of these ramps provided an unexpected benefit to

address community concerns that only one downtown exit ramp at 13th Street did not provide sufficient direct access to the HARP, Convention Center, and Union Avenue District.

### **Ilex Street to Northern Avenue**

Interchange locations in this segment were constrained by neighborhoods on both sides of I-25 and interchange spacing requirements within the segment, as well as by the location of interchanges selected in the downtown Pueblo segment to the north. In response to community concerns, direct access to 1st Street from I-25 was provided, resulting in inadequate spacing for an interchange at Ilex Street. Other constraints in this segment included a need to provide direct access to Northern Avenue from I-25, the desire to improve east-west connectivity at Abriendo Avenue, and the need to provide acceptable access to the adjacent neighborhoods. As a result, five interchange types were considered in this segment. A split-diamond interchange between Abriendo Avenue and Northern Avenue and connected by one-way frontage roads was chosen as the recommended interchange type in this segment. This configuration was recommended because it balances interchange spacing requirements with important local access points, improves access to surrounding neighborhoods, connects to important east-west local roadways, and received the most public support during the interchange development process.

### **Northern Avenue to Pueblo Boulevard**

Interchanges in this segment were located at Indiana Avenue and Pueblo Boulevard, with the primary constraints being the proximity of residences to I-25 near Indiana Avenue, access to the Evraz Rocky Mountain Steel Mill, the wetland located adjacent to the existing Pueblo Boulevard interchange, and the high volume of traffic using the southbound I-25 off-ramp and northbound I-25 on-ramps at Pueblo Boulevard. A single-point diamond interchange was recommended at Indiana Avenue because it minimized ROW needs and maintained access to the Evraz Rocky Mountain Steel Mills. Two interchange alternatives were considered at Pueblo Boulevard, and a partial cloverleaf interchange type was recommended. Although the cloverleaf ramp requires more ROW, this interchange was selected

because it best accommodates the high traffic volumes from eastbound Pueblo Boulevard to northbound I-25.

## **2.6 FINAL DETAILED ALTERNATIVES**

Development of a second Build Alternative evolved while the CDOT Project Team and the stakeholders were in the process of conducting the analyses for alternative interchanges. This “new” Build Alternative (named the Modified I-25 Alternative) is similar to the Existing I-25 Alternative; however, between Ilex Street and Indiana Avenue, the highway would move to a new alignment east of the existing I-25. This alignment shift results in fewer impacts to the Bessemer Neighborhood (although more acquisitions are required in the Eiler Heights subarea, as discussed in **Section 3.6 Social Resources, Economic Conditions, and Environmental Justice**), and the railroad adjacent to the Evraz Rocky Mountain Steel Mills would not have to be moved. The final alternatives moved forward to the FEIS detailed evaluation include:

- ❖ No Action Alternative
- ❖ Existing I-25 Alternative
- ❖ Modified I-25 Alternative (Preferred Alternative)

Descriptions of the final alternatives are provided below.

### **2.6.1 No Action Alternative**

Throughout the process, the No Action Alternative was presented for input from stakeholders in multiple formats and venues. This alternative consists of no capital improvements in the I-25 corridor study area but does include routine maintenance such as pavement overlays and restriping of the existing facility, as defined in PACOG’s fiscally constrained *Pueblo Area 2035 Long Range Transportation Plan* (PACOG, 2008), and eventually the replacement of deficient structures. These routine maintenance projects have committed funding, as described in the *Pueblo Area 2035 Long Range Transportation Plan*, and will occur sometime over the next 20 years. As with the Build Alternatives, the No Action Alternative underwent a thorough analysis to measure how well it met the project Purpose and Need and Evaluation Criteria. Analysis of the No Action Alternative in the FEIS provides a benchmark, enabling decision-makers to compare the magnitude of the environmental effects of each of the Build Alternatives to the

scenario of not making any improvements to I-25 through Pueblo. An overview of the roadway, interchange, network, bicycle, and pedestrian features of the No Action Alternative is provided and illustrated in **Exhibit 2-26**.

### 2.6.2 Existing I-25 Alternative

The Existing I-25 Alternative was the result of modifications and refinements to Strategy 6, “Improve I-25 with Six Lanes and a Low-Speed Loop,” described above. The alternative was developed by the CDOT Project Team and stakeholders during the alternative interchange analysis task. At that time, the full Low-Speed Loop was reduced to an extension of Dillon Drive south to US 50B due to potential impacts to the natural environment such as wetlands, wildlife habitat, park resources, and historic properties. An overview of the roadway, interchange, network, bicycle, and pedestrian features of this Build Alternative is provided and illustrated in **Exhibit 2-27**. Detailed drawings of the Existing I-25 Alternative are shown in **Exhibits 2-28 through 2-31**.

To meet projected capacity needs, the Existing I-25 Alternative would widen I-25 to six lanes (three in each direction) from just north of 29th Street to Indiana Avenue and maintain four lanes (two in each direction) from Indiana Avenue to Pueblo Boulevard on its current alignment. As shown in **Exhibit 2-27**, the Existing I-25 Alternative reconstructs the interchanges at US 50B, Indiana Avenue, and Pueblo Boulevard; provides access to 29th Street via a frontage road; and creates a split-diamond interchange between 13th Street and 1st Street. The split-diamond configuration serving the downtown area allows access to 1st, 4th, 8th, and 13th Streets, as shown in **Exhibit 2-29**. Another split-diamond interchange between Abriendo Avenue and Northern Avenue consolidates access and straightens the existing highway curves; however, this reconfiguration requires the removal of highway access at Central Avenue and the closure of Currie Street.

The Existing I-25 Alternative would improve connectivity off of I-25 by extending Dillon Drive south from 26th Street to US 50B. It would also extend Abriendo Avenue across I-25

to Santa Fe Drive. This connection would provide improved access between the neighborhoods west and east of I-25.

The Existing I-25 Alternative would generally match the current I-25 elevation, except in a few areas where a change in the highway grade is necessary to address safety problems. For example, through downtown, I-25 will be 25 to 40 feet higher than it is currently, which will eliminate the steep vertical curves in this area. There will also be a 20- to 30-foot rise in elevation at the Indiana Avenue interchange in order to develop a full interchange at Indiana Avenue and provide enough clearance for east-west traffic moving underneath I-25. The Existing I-25 Alternative would require the relocation of approximately 1.41 miles of Union Pacific railroad (UPRR) tracks to the east between Abriendo Avenue and Minnequa Avenue to accommodate a wider highway footprint, as detailed in **Section 3.1 Transportation**.

Mitigation elements such as noise walls also have been included in the design of the Existing I-25 Alternative (as described in more detail in **Section 3.5 Noise**). North of the Arkansas River, noise walls are proposed for residential areas from 24th to 29th Street and from 20th to 21st Street, all west of I-25, along with residences on the east side of I-25 from Beech Street to 1st Street. South of Nevada Avenue, noise walls to the west of I-25 are proposed for the Abriendo Avenue residences, the Evans Avenue residences, near the neighborhoods between Maryland Avenue and Reno Avenue, and between Indiana Avenue and Illinois Avenue. Noise mitigation for Mineral Palace Park and Benedict Park is also proposed; however, details of the type of noise mitigation will be determined during final design.

Stormwater quality treatment ponds proposed for the Existing I-25 Alternative are shown in **Exhibits 2-28 through 2-31**. Additional information regarding treatment of highway runoff is provided in **Section 3.15 Water Quality**.

Ownership and maintenance of the new facilities included in the Existing I-25 Alternative are detailed in the Memorandum of Understanding between CDOT and the City of Pueblo, which was finalized in March 2010 (see **Appendix F**).

**EXHIBIT 2-26**  
No Action Alternative

**I-25 Roadway Features**

- 4 existing lanes, 2 in each direction
- Routine maintenance (pavement overlays, striping)

**Interchange Features**

- No improvements to interchanges

**Network Features**

- No improvements to network features

**Bicycle and Pedestrian Features**

- No bicycle or pedestrian improvements



**EXHIBIT 2-27**  
Existing I-25 Alternative

**I-25 Roadway Features**

Six lanes (three in each direction) just north of 29th Street to Indiana Avenue

Standard shoulders and acceleration/ deceleration lanes

- 1 Straighten I-25 through downtown
- 2 Relocate Union Pacific Railroad

**Interchange Features**

- 3 Diamond interchange at US 50B with one-way frontage roads to 29th Street
- 4 Split-diamond interchange between 13th Street and 1st Street with one-way frontage roads between ramps; additional southbound and northbound exit ramps near 6th Street
- 5 Split-diamond interchange between Abriendo Avenue and Northern Avenue with one-way frontage roads connecting the ramps
- 6 Single-point diamond interchange at Indiana Avenue
- 7 Partial cloverleaf interchange at Pueblo Boulevard

**Network Features**

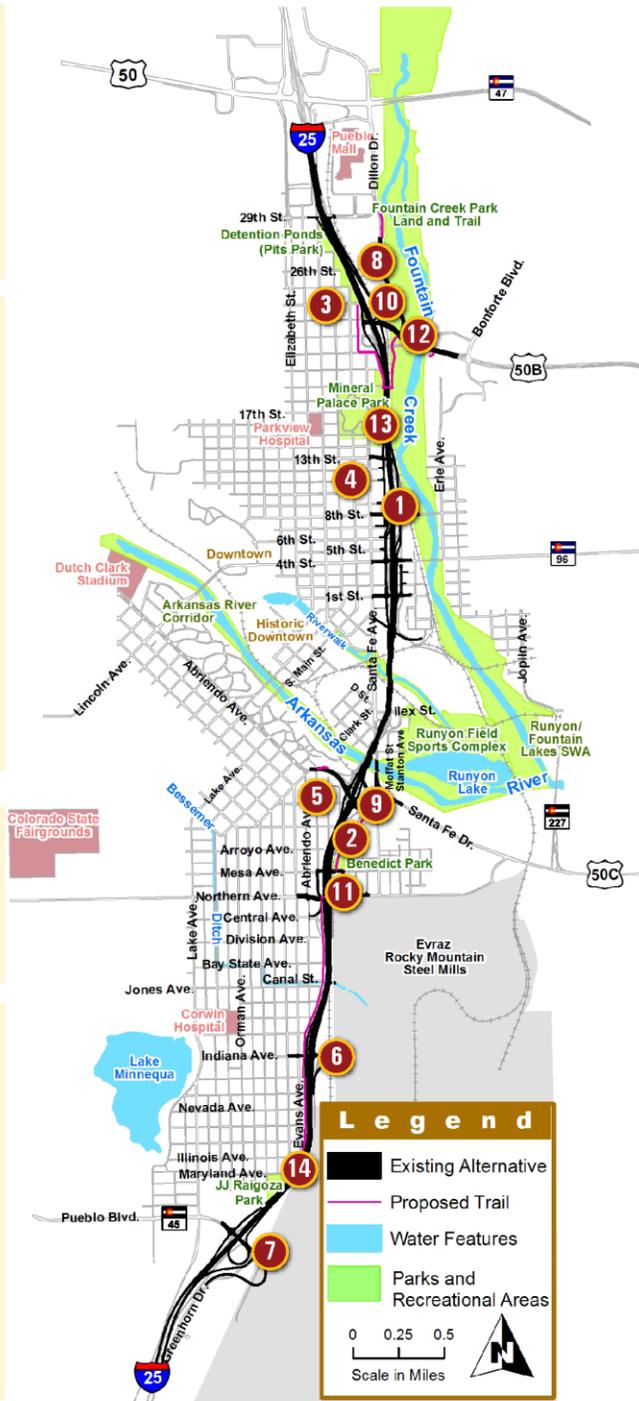
- 8 Extend Dillon Drive south from 26th Street to US 50B
- 9 Connect Abriendo Avenue and Santa Fe Drive (US 50C)

**Bicycle and Pedestrian Features**

- 10 Build sidewalks along Dillon Drive extension and US 50B bridge
- 11 Expand sidewalks on the Mesa Avenue overpass to connect Benedict Park to the west side of I-25
- 12 Build trail from just north of US 50B bridge to Mineral Palace Park
- 13 Construct a bike/pedestrian bridge between Mineral Palace Park and the Fountain Creek Trail
- 14 Build trail between Runyon Field and J.J. Raigoza Park

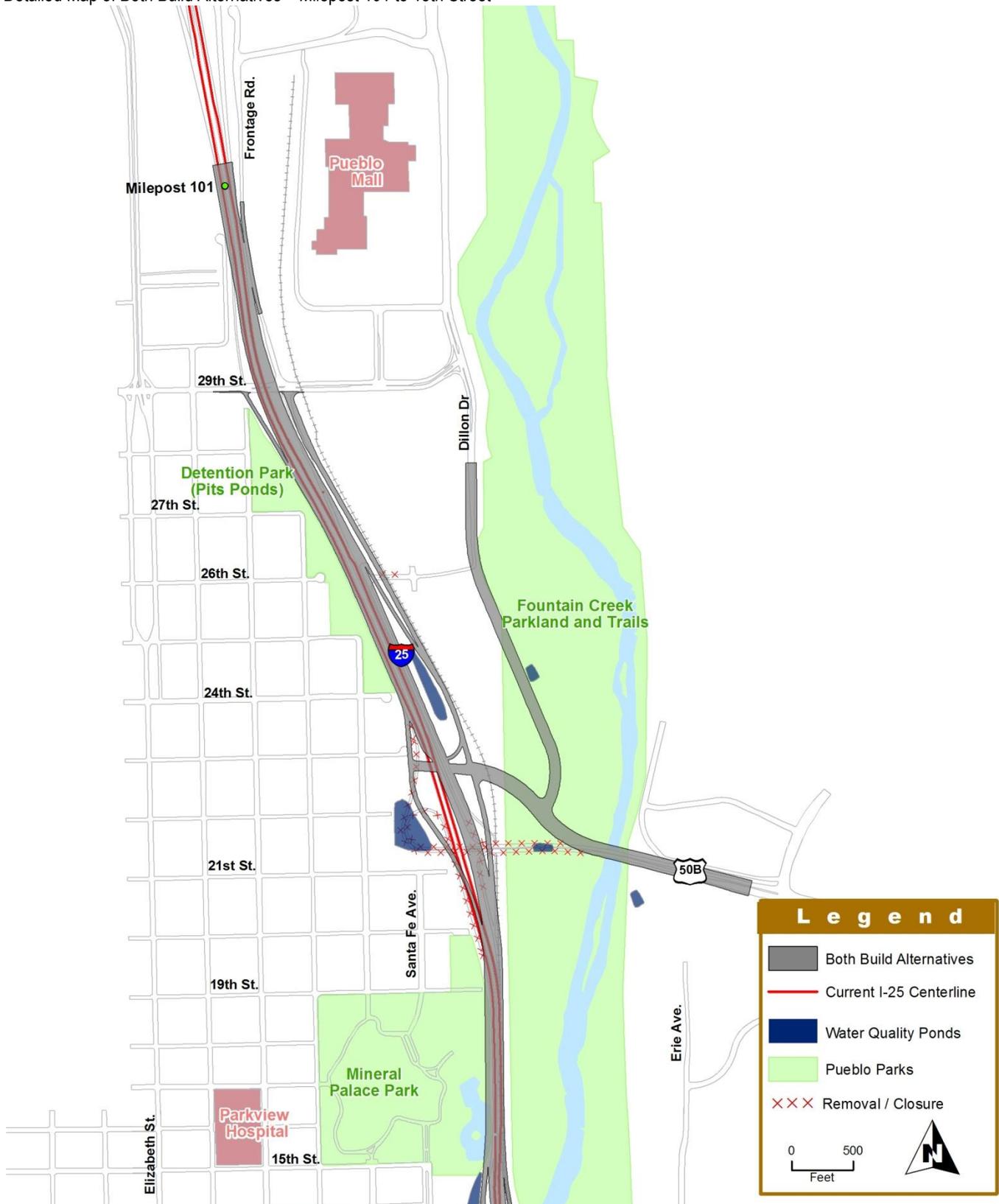
**Other Features**

- Accommodates Circulator Bus System
- Transportation Systems Management (TSM)
- Travel Demand Management (TDM) (By Others)
- Intelligent Transportation Systems (ITS)

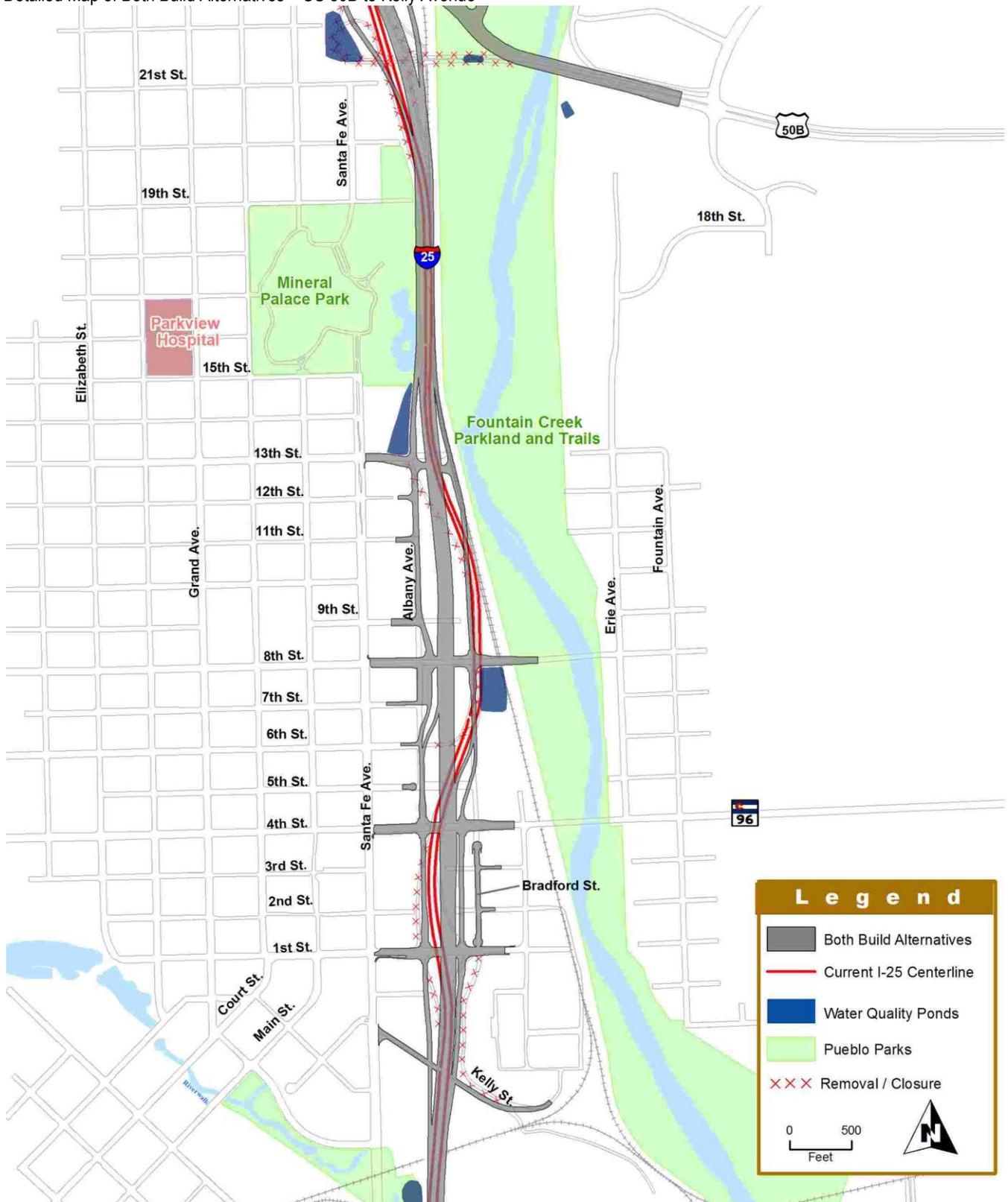


\*Detailed maps of the Existing I-25 Alternative are available in Appendix E.

**EXHIBIT 2-28**  
 Detailed Map of Both Build Alternatives – Milepost 101 to 15th Street



**EXHIBIT 2-29**  
 Detailed Map of Both Build Alternatives – US 50B to Kelly Avenue



**EXHIBIT 2-30**  
 Detailed Map of the Existing I-25 Alternative – Kelly Avenue to Jones Avenue



**EXHIBIT 2-31**  
 Detailed Map of the Existing I-25 Alternative – Jones Avenue to Milepost 94



### 2.6.3 Modified I-25 Alternative (Preferred Alternative)

To meet projected capacity needs, the Modified I-25 Alternative (Preferred Alternative) would widen I-25 to six lanes (three in each direction) from just north of 29th Street to Indiana Avenue and maintain four lanes (two in each direction) from Indiana Avenue to Pueblo Boulevard. The Modified I-25 Alternative (Preferred Alternative), shown in **Exhibit 2-32**, was developed from the Existing I-25 Alternative by the CDOT Project Team and stakeholders and shares the design characteristics of the Existing I-25 Alternative, with the exception of one area of the corridor, as described in the next paragraph.

In the southern part of the corridor between the Arkansas River and Canal Street, implementing the Existing I-25 Alternative would require moving the UPRR tracks 150 feet to the east to make room for widening I-25. Difficulties associated with moving the rail line led to the idea of relocating I-25 to a new alignment to the east at approximately Ilex Street. Moving I-25 to the new alignment in this area would allow the UPRR rail line south of the Arkansas River to remain in place. At approximately Minnequa Avenue, I-25 would bridge over the railroad tracks and run on the west side of the tracks, rejoining the existing I-25 alignment just south of Indiana Avenue. A large-scale map of the Central Area (Phase 2) is shown in **Exhibit 2-33**.

The Modified I-25 Alternative (Preferred Alternative) was found to have unexpected benefits in the southern end of the corridor. By straightening I-25 at Ilex Street, I-25 would leave the existing alignment and continue south. The roadway no longer used as I-25 would be available to become an extension of Santa Fe Avenue (see **Exhibit 2-33**), providing a local road that drivers could use to travel north-south through Pueblo without having to drive on I-25. This extension is not possible under the Existing I-25 Alternative.

A second unexpected benefit of the Modified I-25 Alternative (Preferred Alternative) is that a new east-west direct connection would be made between Abriendo Avenue and Santa Fe Drive (see **Exhibit 2-33**). This connection would provide improved access between the neighborhoods west and east of I-25. An overview of the roadway, interchange, network, bicycle, and pedestrian features of

this Build Alternative is provided and illustrated in **Exhibit 2-32**. Detailed drawings of the Modified I-25 Alternative (Preferred Alternative) are shown in **Exhibits 2-28, 2-29, 2-33, and 2-34**.

The Modified I-25 Alternative (Preferred Alternative) would generally match the current I-25 elevation in areas where the alignment follows the current highway alignment, except in one key area where a change in the vertical grades is necessary to address safety problems. Through the downtown area, I-25 will be 25 to 40 feet higher than it is currently, which will eliminate the steep vertical curves in this area while providing enough clearance for east-west traffic moving underneath I-25.

Mitigation elements such as noise walls are also included in the Modified I-25 Alternative (Preferred Alternative) preliminary design (as described in more detail in **Section 3.5 Noise**). In the area north of the Arkansas River, noise walls are proposed for residential areas from 24th to 29th Street and from 20th to 21st Street, all west of I-25, along with residences on the east of I-25 from Beech Street to 1st Street. South of the Arkansas River, noise walls to the west of I-25 are proposed near the neighborhoods between Maryland Avenue and Reno Avenue, between Indiana Avenue and Illinois Avenue, and near the Evans Avenue Residences. Noise mitigation for Mineral Palace Park is also proposed; however, details of the type of noise mitigation will be determined during final design.

The stormwater quality treatment ponds proposed for the Modified I-25 Alternative (Preferred Alternative) are shown in **Exhibits 2-28, 2-29, 2-33, and 2-34**. Additional information regarding treatment of highway runoff is provided in **Section 3.15 Water Quality**.

Ownership and maintenance of the new facilities included in the Modified I-25 Alternative are detailed in the Memorandum of Understanding between CDOT and the City of Pueblo, which was finalized in March 2010 (see **Appendix F**).

**EXHIBIT 2-32**

**Modified I-25 Alternative (Preferred Alternative)**

**I-25 Roadway Features**

Six lanes (three in each direction) just north of 29th Street to Indiana Avenue  
 Standard shoulders and acceleration/deceleration lanes

- 1 Straighten I-25 through downtown
- 2 Relocate I-25 to the east between Abriendo Avenue to Indiana Avenue to eliminate relocation of the Union Pacific Railroad

**Interchange Features**

- 3 Diamond interchange at US 50B with one-way frontage roads to 29th Street
- 4 Split-diamond interchange between 13th Street and 1st Street with one-way frontage roads between ramps; additional southbound and northbound exit ramps near 6th Street
- 5 Split-diamond interchange between Abriendo and Northern Avenues with one-way frontage roads connecting the ramps
- 6 Single-point diamond interchange at Indiana Avenue
- 7 Partial cloverleaf interchange at Pueblo Boulevard

**Network Features**

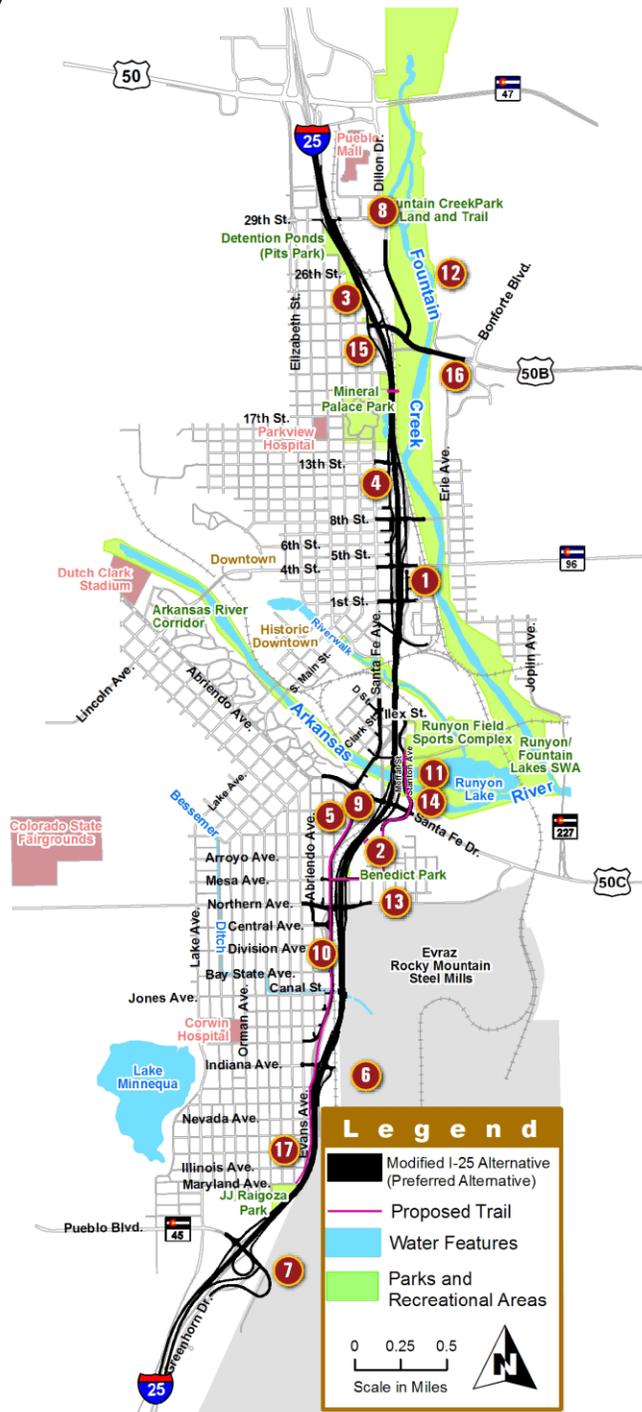
- 8 Extend Dillon Drive south from 26th Street to US 50B
- 9 Connect Abriendo Avenue and Santa Fe Drive (US 50C)
- 10 Extend Santa Fe Avenue from Ilex Street to Minnequa Avenue
- 11 Rebuild Stanton Avenue south over the Arkansas River, intersect with Santa Fe Drive and connect to Santa Fe Avenue

**Bicycle and Pedestrian Features**

- 12 Build sidewalks along Dillon Drive extension and US 50B bridge
- 13 Expand sidewalks on the Mesa Avenue overpass to connect Benedict Park to the west side of I-25
- 14 Build sidewalks along Stanton Avenue to connect to the HARP trail and Benedict Park
- 15 Build trail from just north of US 50B bridge to Mineral Palace Park
- 16 Construct a bike/pedestrian bridge between Mineral Palace Park and the Fountain Creek trail
- 17 Build trail between Runyon Field and J.J. Raigoza park

**Other Features**

Accommodates Circulator Bus System  
 Transportation Systems Management (TSM)  
 Travel Demand Management (TDM) (By Others)  
 Intelligent Transportation Systems (ITS)



\*Detailed maps of the Modified I-25 Alternative are available in Appendix E.

**EXHIBIT 2-33**  
**Detailed Map of the Modified I-25 Alternative (Preferred Alternative) – Kelly Avenue to Jones Avenue**



**EXHIBIT 2-34**  
 Detailed Map of the Modified I-25 Alternative (Preferred Alternative) – Jones Avenue to Milepost 94



## 2.6.4 Refinement Elements of the Build Alternatives

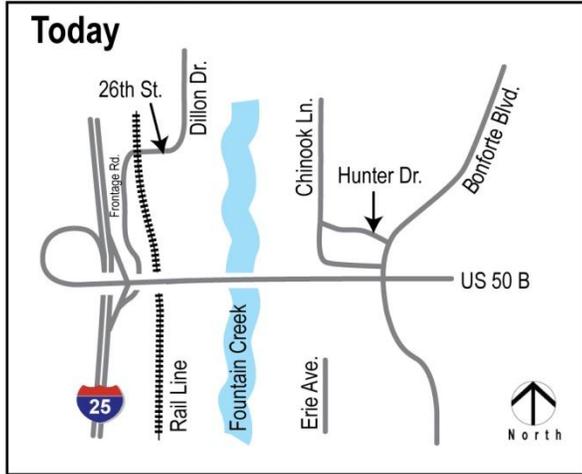
Each of the two Build Alternatives was refined through a series of neighborhood meetings where the surrounding neighbors, business owners and operators, and users of the roadways were invited to provide input on the alternatives to be evaluated in detail. This input resulted in refinements to the two Build Alternatives that have lessened their impacts to the neighborhoods and addressed concerns such as access into neighborhoods from local streets, access into neighborhoods from interchanges, noise wall heights next to homes, and access to destinations such as Runyon Field Sports Complex. Through this intensive stakeholder process, the Build Alternatives were refined in the following ways:

- ❖ The Dillon Drive extension was re-aligned on the west side of Fountain Creek. **Exhibit 2-35** describes and illustrates how stakeholder input changed the design.
- ❖ The one-way frontage roads were realigned within the downtown area to require less property and leave a better local street network. This request came from property owners and City staff. By bringing the frontage roads closer to the highway, fewer properties were impacted.
- ❖ An off-street pedestrian/bicycle trail is envisioned between JJ Raigoza Park and the Runyon Field Sports Complex. The Evans alleyway between Minnequa Avenue and Illinois Avenue is being considered as a potential alignment for the trail. A noise wall is proposed along the I-25 shoulder to mitigate noise impacts. This noise wall, combined with the Evans Avenue alleyway and backyard fences, was thought to create a “canyon” effect between Minnequa Avenue and Illinois Avenue. The idea to develop the alleyway into a trail was conceived to lessen the canyon effect and to turn the space into an amenity for residents. CDOT made every effort to speak with each property owner along this stretch of Evans Avenue to gain early input. For the non-motorized trail to be built using the alleyway between Minnequa Avenue and Illinois Avenue, property owners would need to agree to give up alley access. If property owners are not willing to give up alley access, the trail could be constructed as an on-street facility using Evans Avenue. No decision has been formalized at this time, and CDOT will revisit the trail concept during final engineering design. An illustration of the proposed new trail is shown in **Exhibit 2-36**.
- ❖ The split-diamond interchange configuration between Abriendo Avenue and Northern Avenue was included in for each Build Alternative based on stakeholder input, as described in **Exhibit 2-37** and **Exhibit 2-38**.

**EXHIBIT 2-35**

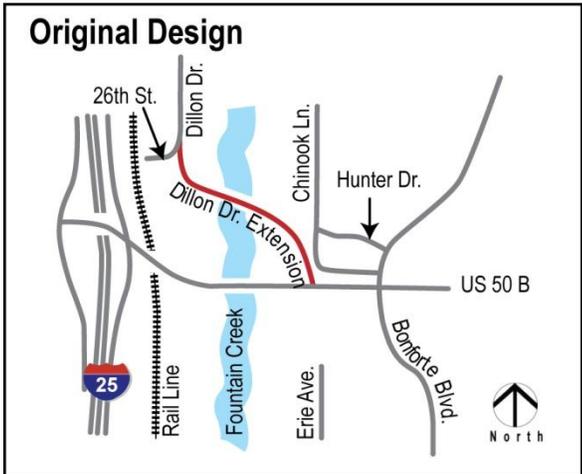
**Existing I-25 Alternative and the Modified I-25 Alternative (Preferred Alternative) - The Dillon Drive Extension**

Note: Graphics not to Scale.



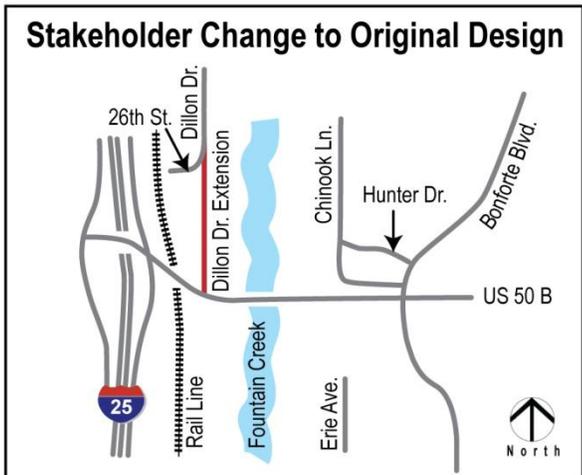
**Today**

Dillon Drive does not currently extend south of 26th Street; 26th Street crosses the railroad tracks at-grade and intersects with the remaining section of the old I-25 frontage road.



**Original Design**

CDOT Project Team members designed an extension of Dillon Drive to provide a connection with US 50B. The plan was to cross Fountain Creek and connect to US 50B on the east side of the river to line up with a City- proposed future connection to Erie Avenue; this would provide a Dillon Drive connection to neighborhoods south of US 50B. Stakeholders, specifically, those from the Creekside development, loudly voiced their objections to this design. They believe that constructing Dillon Drive on the east side of the creek would result in increased noise to their neighborhood and would cause stream bank instability that might affect their properties. Before crossing the rail tracks, 26th Street would be dead-ended because the proposed improvements to the I-25 and US 50B interchange would require closure of the existing frontage road.

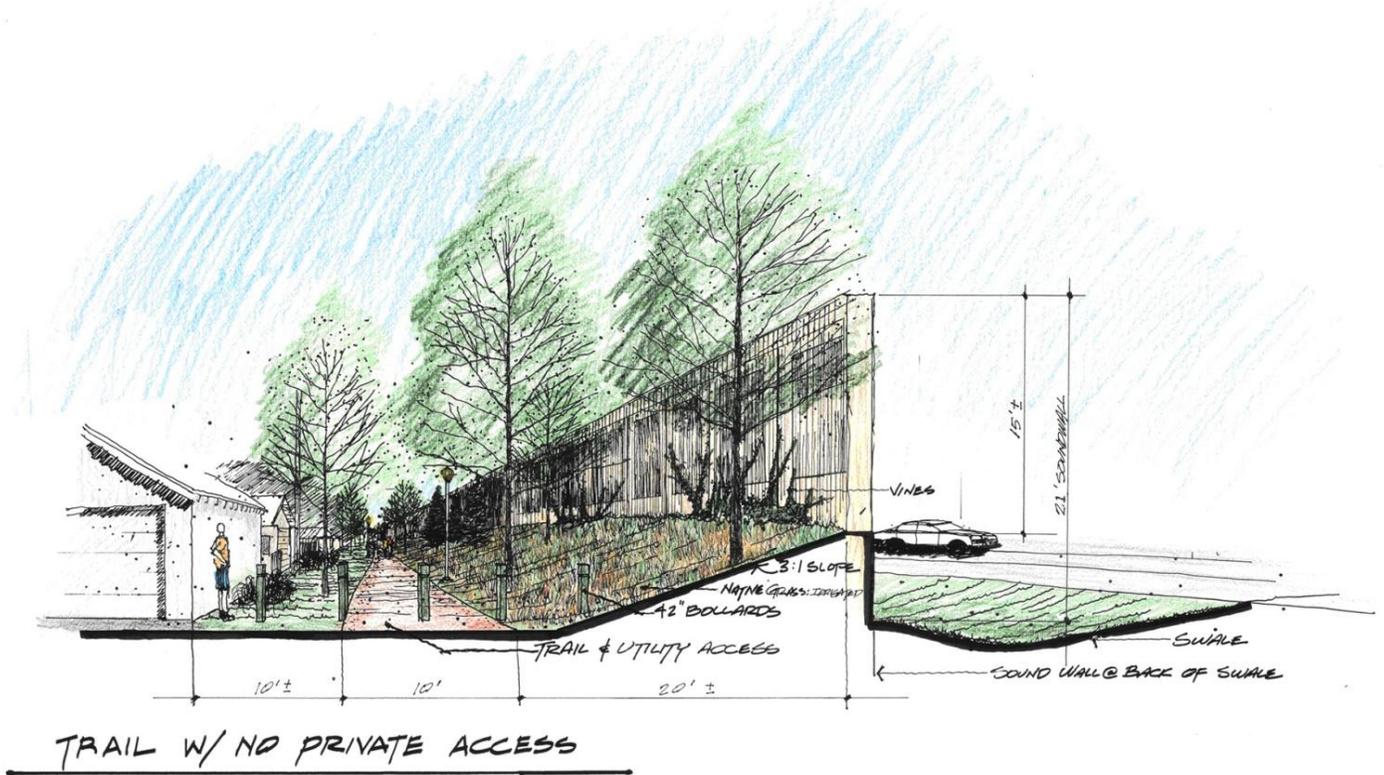


**Stakeholder Change to Original Design**

In response to stakeholder input, the CDOT Project Team redesigned the Dillon Drive extension to remain on the west side of Fountain Creek. The CDOT Project Team studied the effects to the City's long-term goal of connecting Dillon Drive south to Erie Avenue and found the connectivity can be provided by extending Erie Avenue north to US 50B. Vehicles from neighborhoods south of US 50B can turn west on to US 50B and then turn north onto Dillon Drive. The team confirmed the ability of the US 50B improvements to successfully handle the additional traffic should the City make the connection in the future.

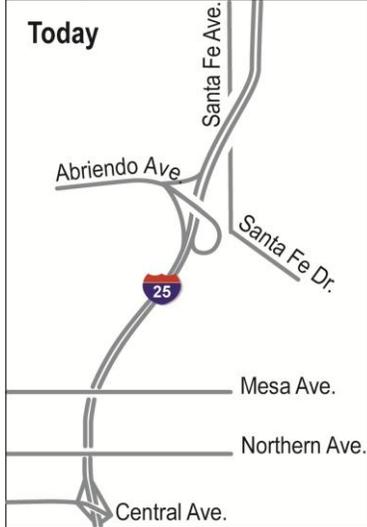
EXHIBIT 2-36

Proposed Trail in the Alley behind Evans Avenue between Minnequa Avenue and Illinois Avenue



**EXHIBIT 2-37****Existing I-25 Alternative - Split-Diamond Interchange at Abriendo Avenue and Northern Avenue**

Note: Graphics not to Scale.

**Today**

There is currently a “trumpet interchange” interchange at Abriendo Avenue. There is no access to the east of I-25, and no connection exists between Abriendo Avenue and Santa Fe Drive. Mesa Avenue and Northern Avenue bridge over I-25 and do not have interchanges with the highway. Northern Avenue is a major east-west arterial street that eventually becomes State Highway 78 at Prairie Avenue, which is about 1.7 miles west of I-25. The Central Avenue diamond interchange is 1 block south of Northern Avenue. Similar to the Abriendo Avenue interchange, the Central Avenue interchange does not provide access east of I-25 due to the presence of the Evraz Rocky Mountain Steel Mills property.

**Original Design**

To improve east-west local mobility in this area, the CDOT Project Team looked at two different options. For one option, the team designed an interchange at Northern Avenue, which is a major east-west arterial street, and closed the existing interchange at Central Avenue because Central Avenue is a discontinuous minor street. A second design option involved closing the existing Central Avenue interchange and constructing an interchange at Abriendo Avenue and Santa Fe Drive to provide the needed east-west local mobility (not shown on the map). When the CDOT Project Team took both options to the City planners and communities, neither option was preferred. The stakeholders recommended the design team look at other options, and changes were made accordingly.

**Stakeholder Change to Original Design**

When the CDOT Project Team took the original design to the stakeholders for their input, there were concerns about the lack of access at Abriendo Avenue. Stakeholders expressed the importance of access at Abriendo Avenue and at Northern Avenue. The CDOT Project Team found that providing a split-diamond interchange between Abriendo Avenue and Northern Avenue would enhance local mobility and reconnect Santa Fe Drive and Abriendo Avenue, re-establishing the east-west link that was lost when I-25 was constructed in the 1950s. As shown in the graphic, Mesa Avenue bridges over both I-25 and the interchange frontage roads.

**EXHIBIT 2-38****Modified I-25 Alternative (Preferred Alternative) Split-Diamond Interchange at Abriendo Avenue and Northern Avenue**

Note: Graphics not to Scale.

**Today**

There is currently a “trumpet interchange” interchange at Abriendo Avenue. There is no access to the east of I-25, and Abriendo Avenue and Santa Fe Drive do not connect. Mesa Avenue and Northern Avenue bridge over I-25 and do not have interchanges with the highway. Northern Avenue is a major east-west arterial street that eventually becomes State Highway 78 at Prairie Avenue, which is about 1.7 miles west of I-25. The Central Avenue diamond interchange is 1 block south of Northern Avenue. Similar to the Abriendo Avenue interchange, the Central Avenue interchange does not provide access east of I-25 due to the presence of the Evraz Rocky Mountain Steel Mills property.

**Original Design**

In the Modified I-25 Alternative (Preferred Alternative), I-25 would leave its existing alignment and be relocated to the east for roughly 2 miles between Ilex Street on the north and just south of the entrance to the Evraz Rocky Mountain Steel Mills. At this southern location, the highway would rejoin the existing alignment through the rest of the project corridor. The existing I-25 roadway would be reused to provide an extension of Santa Fe Avenue. A split-diamond interchange between Abriendo Avenue and Northern Avenue was proposed. This would provide an opportunity for Abriendo Avenue to reconnect to Santa Fe Drive, as it did before I-25 was constructed in the 1950s. Within this design, the split-diamond frontage roads would intersect with Mesa Avenue and Northern Avenue. When this design was taken to the stakeholders, the nearby neighborhoods stated a strong preference for not providing access from I-25 to Mesa Avenue.

**Stakeholder Change to Original Design**

As shown in the graphic with a red arrow, the CDOT Project Team responded to the stakeholders and redesigned the split-diamond frontage roads to go under Mesa Avenue. This change appeals to the neighborhoods because they want to keep the Mesa Avenue bridge more pedestrian friendly to provide easy access between neighborhoods on both sides of I-25.

In addition, the following refinement was made to the Modified I-25 Alternative (Preferred Alternative).

- ❖ Stanton Avenue was developed, beginning at a new intersection with Santa Fe Avenue at D Street, as shown in **Exhibit 2-33**. A new Stanton Avenue would run east from Santa Fe Avenue, go under I-25, and turn south at the Runyon Field Sports Complex. The road would continue south over the Arkansas River, intersect with Santa Fe Drive, and connect to the existing Santa Fe Avenue. This new configuration would allow for Locust Street to be connected to B Street west of Santa Fe Avenue. The request for this change came from the Bessemer Neighborhood east of I-25. Residents were extremely concerned about the neighborhood losing direct access from downtown. The request sent the CDOT Project Team “back to the drawing board” and resulted in Stanton Avenue being redesigned on a bridge over the Arkansas River.

### 2.6.5 Bicycle and Pedestrian Accommodations for both Build Alternatives

The Community Vision for the New Pueblo Freeway charges the CDOT Project Team with finding a multi-modal and forward-looking solution. Extensive bicycle and pedestrian facilities are planned as a part of both Build Alternatives.

A consistent concern heard from the citizens of Pueblo was that I-25 is a barrier between neighborhoods, particularly for bicycles and pedestrians. Parks and open spaces are on the opposite side of the highway and are only accessible by car. Trails were discussed extensively during the neighborhood meetings to refine the Build Alternatives, and the participants actively expressed the need for trails and sidewalks to reconnect neighbors, neighborhoods, parks, and businesses.

Both Build Alternatives improve bicycle and pedestrian features by building sidewalks along the Dillon Drive extension and the US 50B Bridge. The Modified I-25 Alternative (Preferred Alternative) also adds sidewalks along Stanton Avenue, connecting the HARP to Benedict Park. Other bicycle and pedestrian facility improvements for both Build Alternatives include expanded sidewalks on the Mesa Avenue overpass, new trails from Mineral Palace Park to the US 50B Bridge and between Runyon Field and JJ Raigoza Park, as well as a new pedestrian bridge between Mineral Palace Park and the Fountain Creek Trail.

The completion of proposed trails and sidewalks will provide continuous bicycle and pedestrian access between 29th Street in the north to Pueblo Boulevard in the south. Neighbors will be able to access trails near their homes that will provide families with safe, non-motorized access to Mineral Palace Park, Benedict Park, JJ Raigoza Park, Historic Arkansas Riverwalk of Pueblo, the Runyon Field Sports Complex, the Runyon/Fountain Lakes State Wildlife Area, and the Fountain Creek Park Land and Trail system.

## 2.7 IDENTIFICATION OF A PREFERRED ALTERNATIVE

After careful consideration of the goals and objectives identified in **Chapter 1 – Purpose and Need**, as well as the potential impacts resulting from the No Action Alternative and both Build Alternatives (compared in **Chapter 3 – Affected Environment and Environmental Consequences**), FHWA and CDOT preliminarily identified the Modified I-25 Alternative as the Preferred Alternative for improvements to I-25 through Pueblo in the DEIS for public and agency review. After consideration of the public and agency comments on the DEIS, in addition to the factors noted above, FHWA and CDOT have identified the Modified I-25 Alternative as the Preferred Alternative in the FEIS. An overview of the Modified I-25 Alternative (Preferred Alternative) is shown in **Exhibit 2-32**.

### 2.7.1 Meeting the Project’s Purpose and Need

The Modified I-25 Alternative is identified by FHWA and CDOT as the Preferred Alternative for the New Pueblo Freeway. The rationale for this decision is based on how well each alternative meets the Purpose and Need for the project. Both Build Alternatives address the safety and capacity elements of the Purpose and Need. In addition, the Modified I-25 Alternative (Preferred Alternative) best meets the local and regional mobility elements as described below.

- ❖ Both Build Alternatives would restore some connectivity to neighborhoods that were previously divided by the original construction of I-25. However, the Modified I-25 Alternative (Preferred Alternative) provides additional connectivity to the north and south with the extension of Stanton Avenue north and west to Santa Fe Avenue and south to Santa Fe Drive. Residents of the Bessemer Neighborhood east of I-25 would be more connected to the rest of the neighborhood, as well as the community resources in the Grove Neighborhood

and Downtown Neighborhood. This opportunity is not available under the No Action Alternative or the Existing I-25 Alternative.

- ❖ The Modified I-25 Alternative (Preferred Alternative) improves north-south local and regional mobility by converting the existing I-25 south of the Arkansas River to an extension of Santa Fe Drive to facilitate local trips more efficiently and maintain regional trips on I-25 (see **Exhibit 2-33** for more detail). This opportunity is not available under the No Action Alternative or the Existing I-25 Alternative.
- ❖ The Modified I-25 Alternative (Preferred Alternative) improves east-west local mobility over the Existing I-25 Alternative by providing a more direct connection to I-25 at Abriendo Avenue. Under the Existing I-25 Alternative, drivers on Abriendo Avenue would have to turn at a signalized intersection at Santa Fe Drive to remain on Abriendo Avenue (see **Exhibit 2-30**). For the Modified I-25 Alternative (Preferred Alternative), this is a direct connection that does not require a turn at a signal (see **Exhibit 2-33**).
- ❖ The extension of Santa Fe Avenue under the Modified I-25 Alternative (Preferred Alternative) provides a benefit to residences on the south end between Minnequa Avenue and Logan Avenue by returning the functionality of their properties. When I-25 was originally constructed, homes that had access to Schley Avenue lost that access, and their front doors were adjacent to the new highway. As a result, access to these homes was provided only through the back alley. With the extension of Santa Fe Avenue, access to the front of these homes would be restored.

### 2.7.2 Other Factors Considered

In addition to the Purpose and Need, other factors were considered in the identification of the Preferred Alternative, including a comparison of potential impacts to the environment under each alternative; the cost effectiveness of each alternative; the recommendation of local officials; and consistency with other regulatory requirements, in particular Section 4(f) of the U.S. Department of Transportation Act of 1966 and Section 404 of the Clean Water Act, both of which have specific requirements that must be met by the Preferred Alternative. Each of these elements is summarized below.

- ❖ **Cost.** The construction cost of each Build Alternative was considered; however, the costs between the two

Build Alternatives were too similar to be a differentiating factor. The Existing I-25 Alternative would cost approximately \$710.1 million to construct, and the Modified I-25 Alternative (Preferred Alternative) would cost approximately \$760.6 million to construct.

- ❖ **Support from Local Officials.** The City Parks and Recreation Department expressed support for the Modified I-25 Alternative (Preferred Alternative) in a letter dated July 13, 2010. Preference for the Modified I-25 Alternative (Preferred Alternative) is based on improved trail connections and facilitation of north-south movement in the corridor. City officials have influenced the design of the Modified I-25 Alternative (Preferred Alternative) and have assisted with the identification of appropriate mitigation measures. Support for the Modified I-25 Alternative (Preferred Alternative) has also been provided by the Project Leadership Team. (For information on the membership, roles and responsibilities, and contributions of this team, refer to **Chapter 6 – Comments and Coordination**.) In 2013, the City Council of Pueblo, PACOG, and Pueblo County Commissioners each expressed support and preference for the Modified I-25 Alternative as the Preferred Alternative in formal resolutions, which can be found in **Appendix B**.
- ❖ **Support from the Public.** The CDOT Project Team used an extensive public involvement approach during the development of each alternative, as discussed earlier in this chapter and in **Chapter 6 – Comments and Coordination**. Throughout the development of the Build Alternatives, the public consistently expressed preference for the Modified I-25 Alternative (Preferred Alternative). During the formal comment period for the DEIS, residents of the Bessemer Neighborhood east of I-25 and south of Mesa Avenue expressed concern about impacts to their community as a result of the Modified I-25 Alternative (Preferred Alternative), in particular, the number of property acquisitions that would be required south of Mesa Avenue. CDOT and the City of Pueblo met with representatives from the community in the beginning of 2012 to discuss these concerns and identify additional mitigation measures, which are documented at the end of **Section 3.6 Social Resources, Economic Conditions, and Environmental Justice**.
- ❖ **Project Impacts.** Both Build Alternatives share the same impacts in the North Area (Phase 1) and South Area (Phase 2) of the project. The only difference in impacts occurs in the Central Area (Phase 2) of the

project between Ilex Street and the Evraz Rocky Mountain Steel Mills. These differences are as follows:

- Wetlands impacts would differ by less than 1 acre, with the Modified I-25 Alternative (Preferred Alternative) impacting 0.88 acre more wetlands area than the Existing I-25 Alternative.
- Impacts to waters of the U.S. (as defined by the U.S. Army Corps of Engineers) are nearly equal for the two alternatives. Under the Existing I-25 Alternative, the single bridge piers currently in place at the Arkansas River crossing would be removed and replaced; however, they would be placed in the same locations as the existing piers and designed to occupy a slightly smaller footprint. For the Modified I-25 Alternative (Preferred Alternative), 18 new bridge piers would be placed in the Arkansas River to support the bridges for I-25, two ramps, and the extension of Stanton Avenue, resulting in 0.02 acre of impacts to the Arkansas River.
- Although the Modified I-25 Alternative (Preferred Alternative) would impact seven additional historic properties compared to the Existing I-25 Alternative, the Modified I-25 Alternative (Preferred Alternative) would have fewer impacts to properties within the Steelworks Suburbs Historic District, with 56 being fully or partially acquired compared to 68 properties under the Existing I-25 Alternative.
- Both Build Alternatives would impact Benedict Park. While the initial impact would be greater under the Modified I-25 Alternative (Preferred Alternative), the Modified I-25 Alternative (Preferred Alternative) allows for the construction of a new park that would be a minimum 3.93 acres to a maximum 4.30 acres in size to replace the existing Benedict Park, resulting in a larger contiguous park. The Existing I-25 Alternative would reduce the size of the existing park to 1.50 acres and create a new 2.55-acre park across the roadway from the existing Benedict Park.
- Although the Modified I-25 Alternative (Preferred Alternative) would impact more of the Runyon/Fountain Lakes State Wildlife Area than the Existing I-25 Alternative, the impacts are minor and do not affect the recreational use.
- There is very little difference between the Existing I-25 Alternative and Modified I-25 Alternative (Preferred Alternative) in terms of impacts to other resources. Both alternatives would impact minimal amounts of wildlife habitat, including Arkansas darter and plains leopard frog habitat. The Modified I-25 Alternative (Preferred Alternative) would impact one additional hazardous material site than the Existing I-25 Alternative, but it would also require less impervious surface area (3 acres less than the Existing I-25 Alternative), which would result in lower pollutant levels than the Existing I-25 Alternative.

With mitigation, most project impacts can be avoided or minimized.

❖ **Section 4(f) of the U.S. Department of Transportation Act of 1966.** Section 4(f) stipulates that FHWA and other Department of Transportation agencies cannot approve the use of land from publicly owned parks or recreational areas, wildlife or waterfowl refuges, or public or private historical sites unless the following conditions apply:

- A determination is made that there is no feasible and prudent alternative to the use of land from the property, and the action includes all possible planning to minimize harm to the property resulting from such use; or
- The use of property, including any measures to minimize harm, will have a *de minimis* impact on the property.

Section 4(f) legislation requires the selection of an alternative that avoids the use of Section 4(f) property if that alternative is deemed feasible and prudent. The Section 4(f) regulation states that, if there is no feasible and prudent alternative that avoids use of Section 4(f) properties, FHWA “may approve only the alternative that causes the least overall harm in light of the statute's preservation purpose” (23 Code of Federal Regulations [CFR] 774).

Based on the Section 4(f) Evaluation, included here as **Chapter 4 – Section 4(f) Evaluation**, the Modified I-25 Alternative (Preferred Alternative), with the proposed mitigation, appears to cause the least overall harm to Section 4(f) properties. This identification of the Modified I-25 Alternative (Preferred Alternative) is subject to public and agency review and comment on the FEIS. Of the 39 properties for which a transportation use has been identified, a comparison of the Build Alternatives indicates that the Existing I-25 Alternative would result in greater harm to five properties. The Modified I-25 Alternative (Preferred Alternative) would result in greater harm to four properties. For all other properties, the relative harm is

considered equal. The key differences are summarized below and detailed in **Section 4.6 Least Overall Harm Analysis**.

Mitigation for impacts to Benedict Park included in the Modified I-25 Alternative (Preferred Alternative) would provide a larger contiguous park (3.93 acres to 4.30 acres in size, compared to the 1.92-acre existing park), more amenities, and improved access, resulting in a net benefit to the park and its users. This park plan is made possible through property acquisition and is only feasible under the Modified I-25 Alternative (Preferred Alternative), which requires a full acquisition of the current Benedict Park. The Modified I-25 Alternative (Preferred Alternative) avoids impacts to the mainline of the UPRR and avoids the High Line Rail, a unique and visible feature of the historic Colorado & Wyoming Railroad. In addition, as previously noted, the Modified I-25 Alternative (Preferred Alternative) has fewer impacts to properties within the Steelworks Suburbs Historic District.

- ❖ **Section 404 (b)(1) Guidelines.** Waters of the U.S., including wetlands, are regulated by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act.

Section 404 (b)(1) guidelines require that the Preferred Alternative selected be the least environmentally damaging practicable alternative (LEDPA), that is, the practical alternative that results in a proposed discharge (of dredged or fill material) that would have the least adverse effect on the aquatic environment.

#### SECTION 404(b)(1) GUIDELINES OF THE CLEAN WATER ACT

##### What is the LEDPA?

The least environmentally damaging practicable alternative (LEDPA) is the practical alternative that results in a proposed discharge (of dredged or fill material) that would have the least adverse effect on the aquatic environment.

##### When is an alternative considered practicable?

An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. [40 Code of Federal Regulations 230.10(a)(2)]

Generally, the analysis of reasonable alternatives provides the information for the evaluation of practicable alternatives under the 404 (b)(1) guidelines.

The overall project purpose is used to determine whether practicable alternatives exist to a proposed project. According to 40 CFR 230.10(a)(2), “[a]n alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.” No discharge of dredged or fill material will be permitted “if there is a practicable alternative to the proposed discharge that would have a less adverse impact on the aquatic ecosystem.”

As described in **Chapter 3 – Affected Environment and Environmental Consequences**, the alternatives developed for the project have avoided the majority of wetlands and waters of the U.S. within the study area, as summarized below.

- Wetlands impacts differ by less than 1 acre, with the Modified I-25 Alternative (Preferred Alternative) impacting 0.88 acre more wetlands area than the Existing I-25 Alternative. The wetland resources impacted by both Build Alternatives are unavoidable and may be mitigated within the watershed, potentially providing wetlands of equal or greater functional value than those impacted.
- Impacts to waters of the U.S. (as defined by the U.S. Army Corps of Engineers) are nearly equal for the two Build Alternatives. Under the Existing I-25 Alternative, the single bridge piers currently in place at the Arkansas River crossing would be removed and replaced; however, they would be placed in the same locations as the existing piers and designed to occupy a slightly smaller footprint. For the Modified I-25 Alternative (Preferred Alternative), 18 new bridge piers would be placed in the Arkansas River to support the bridges for I-25, two ramps, and the extension of Stanton Avenue, resulting in 0.02 acre of impacts to the Arkansas River.
- Although the Existing I-25 Alternative has the least adverse effect on the aquatic environment, the Modified I-25 Alternative (Preferred Alternative) with the proposed mitigation appears to cause the least overall harm to Section 4(f) properties. The selection of the Existing I-25 Alternative as the LEDPA would cause non-compliance with Section 4(f) legislation and thus is not considered practicable. Therefore, FHWA and CDOT have identified the Modified I-25 Alternative (Preferred Alternative) as the LEDPA for detailed evaluation, and this was concurred upon by the U.S. Army

Corps of Engineers in December 2010. This coordination is documented in **Appendix B**.

### 2.7.3 Conclusion

FHWA and CDOT identified the Modified I-25 Alternative as the Preferred Alternative for the New Pueblo Freeway because it best meets the project Purpose and Need and, with the proposed mitigation, appears to cause the least overall harm to Section 4(f) properties. This is consistent with the requirements of Section 4(f) of the U.S. Department of Transportation Act of 1966 and Section 404 (b)(1) of the Clean Water Act. Feedback provided during the FEIS public review process will be considered by FHWA and CDOT prior to making the final selection of the Preferred Alternative in the Record of Decision (ROD).

The PACOG is preparing an amendment to the Fiscally Constrained Plan in the *Pueblo Area 2035 Long Range Transportation Plan* that will identify between \$300 and \$315 million for New Pueblo Freeway project improvements. Implementation of the full project is estimated to cost approximately \$760.5 million (based on preliminary design estimates in 2010 dollars), including design, ROW acquisition, and construction. This comprises more than the \$300 to 315 million in funds included in the Plan amendment. The scale of the Preferred Alternative and funding limitations dictate that the project be constructed in phases. Two phases, designated as Phase 1 and Phase 2, are proposed; phasing of the project is discussed in greater detail in **Chapter 5 – Phased Project Implementation**.

Phase 1, currently the only funded phase of the project, would be constructed first and consists of improvements planned from approximately the Ilex interchange north to 29th Street and connecting the I-25 mainline improvements to those previously completed just north of 29th Street. Smaller individual construction projects within this phase are described in **Chapter 5 – Phased Project Implementation**. These projects were identified as the first construction phase because they address many of the existing geometric deficiencies and roadway segments with poor accident ratings and would provide additional roadway capacity along the sections of I-25 with the most congestion, as identified in the project Purpose and Need.

These improvements are considered a reasonable expenditure of funds and would incrementally contribute to addressing the Purpose and Need of the project even if no additional transportation improvements are made in the area. The improvements proposed for each project included in Phase 1 would have independent utility in that they would provide transportation benefits, would be a reasonable expenditure of funds even if no additional improvements are made in the area, and each element connects logical termini.

Because this FEIS addresses regional transportation needs, the study considered environmental matters on a broad scope. More detail on project cost and phased implementation is provided in **Chapter 5 – Phased Project Implementation**.